

From: Yu, Misook
Sent: Thursday, December 18, 2003 8:45 AM
To: Schreiber, David
Subject: FW: 09873409

110713
12-18-03, my

This is the case we discussed yesterday. Would you please align SEQ ID NOs 1-8 (proteins) against NCBI # AA073470 (812 aa protein), also align SEQ ID NOs 9-16 against NCBI # AY234788 (2906 bp cDNA). Thank you.

-----Original Message-----

From: Yu, Misook
Sent: Wednesday, December 17, 2003 11:44 AM
To: Schreiber, David
Subject: FW: 09873409

Pls let me know when you have a few minutes, I would like to discuss with you about this case. It appears that the protein sequences are deduced from two major BAC clones (about 100 kb each) and sequence search did not reveal any of the BAC clones and I wonder why.

Examiner Misook Yu, Ph.D.
703-308-2454 (Phone)
Art Unit 1642
CM1-8E18 (Room)
CM1-8E12 (Mail Box)

-----Original Message-----

From: Yu, Misook
Sent: Wednesday, December 17, 2003 9:57 AM
To: Schreiber, David
Subject: 09873409

David, Would you pls align SEQ IS NOs 1-8 (all proteins)? I would like to know how different they are. It is due this biweek. Thanks.

Examiner Misook Yu, Ph.D.
703-308-2454 (Phone)
Art Unit 1642
CM1-8E18 (Room)
CM1-8E12 (Mail Box)

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GenCore version 5.1.6
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OM nucleic - nucleic search, using sw model

Run on: December 18, 2003, 13:01:35 ; Search time 30 seconds
(without alignments)
3.983 Million cell updates/sec

Title: AY234788
Perfect score: 2906
Sequence: 1 cctaatccctcaatcctc.....atgcacagtcagtcagtgca 2906

Scoring table: IDENTITY NUC
Gapop 10.0, Gapext 0.5

Searched: 8 segs, 20558 residues

Total number of hits satisfying chosen parameters: 16

Minimum DB seq length: 0
Maximum DB seq length: 200000000

Post-processing: Minimum Match 0%
Maximum Match 100%

Listing first 8 summaries

Database : US09873409.seq:*

Pred. No. is the number of results predicted by chance to have a
score greater than or equal to the score of the result being printed,
and is derived by analysis of the total score distribution.

SUMMARIES			
Result No.	Score	Query Match Length	ID
1	2821	97.1	2856 1 US-09-873-409-10
2	2793	96.1	3177 1 US-09-873-409-12
3	2793	96.1	3621 1 US-09-873-409-14
4	2793	96.1	3702 1 US-09-873-409-13
5	2066	71.1	2066 1 US-09-873-409-9
6	755.2	26.0	1175 1 US-09-873-409-11
7	727.2	25.0	1940 1 US-09-873-409-16
8	727.2	25.0	2021 1 US-09-873-409-15

ALIGNMENTS

RESULT 1
US-09-873-409-10
Sequence 10, Application US/09873409
GENERAL INFORMATION:
APPLICANT: Frank, Markus
TITLE OF INVENTION: A Gene Encoding a Multidrug Resistance Human P-Glycoprotein
FILE REFERENCE: 81994/266611
CURRENT APPLICATION NUMBER: US/09/873,409
NUMBER OF SEQ ID NOS: 19
SOFTWARE: PatentIn version 3.0
SEQ ID NO 10
LENGTH: 2856
TYPE: DNA
ORGANISM: Homo sapiens
US-09-873-409-10

Query Match 97.1%; Score 2821; DB 1; Length 2856;

Best Local Similarity 98.3%; Pred. No. 4,4e-11;
Matches 2856; Conservative 0; Mismatches 0; Indels 50; Gaps 1;

Qy	1	CCTAATTCCTCTAATATCTCTCTGAGCCCTAAACCAATATATATATATATATAT	60
Db	1	CCATATTCCTCTAATATCTCTCTGAGCCCTAAACCAATATATATATATATATAT	60
Qy	61	GCTCTTCTTAAT	120
Db	61	GCTCTTCTTAAT	120
Qy	121	TTAGTGAATTCATAGAGATTTATGATTTGAGAGACAGAGTCTTCTTGAACCTTCG	180
Db	121	TTAGTGAATTCATAGAGATTTATGATTTGAGAGACAGAGTCTTCTTGAACCTTCG	180
Qy	181	CAATAGCCCGAGAGCTGCTTCAATATTTCCAGCTATTTGAATGAACCCAGTATAG	240
Db	167	-----TTATTTGAATGAACCCAGTATAG	190
Qy	241	ATACTTTTCCACAGCTGATATATTAACCTGATCATAGAAAGAACTGTGAAATTTAA	300
Db	191	ATACTTTTCCACAGCTGATATATTAACCTGATCATAGAAAGAACTGTGAAATTTAA	250
Qy	301	ATGTTTCTTCAAT	360
Db	251	ATGTTTCTTCAAT	310
Qy	361	GAATTAAGTCTGAGAGACAGTCCCTTGTGCTCTCAATGAGAGTGGAAAGTACG	420
Db	311	GAATTAAGTCTGAGAGACAGTCCCTTGTGCTCTCAATGAGAGTGGAAAGTACG	370
Qy	421	TAGTCAGCTCTGACAGAGTTATATATATATATATATATATATATATATATAT	480
Db	371	TAGTCAGCTCTGACAGAGTTATATATATATATATATATATATATATATATAT	430
Qy	481	ATGACATCAGAGCTTTAATATGTCGGCATTATGAGACATATTTGAGTGTATG	540
Db	431	ATGACATCAGAGCTTTAATATGTCGGCATTATGAGACATATTTGAGTGTATG	490
Qy	541	AGCTGTTTGTTCGGGACCACTCATCAATATCAAGTATGACGAGATGATG	600
Db	491	AGCTGTTTGTTCGGGACCACTCATCAATATCAAGTATGACGAGATGATG	550
Qy	601	CTGATGAAGAGATGAGAGAGAGAGAGAGAGAGAGAGAGAGAGAGAGAGAG	660
Db	551	CTGATGAAGAGATGAGAGAGAGAGAGAGAGAGAGAGAGAGAGAGAGAGAG	610
Qy	661	TTCTTAATTAATTAATTAATTAATTAATTAATTAATTAATTAATTAATTAAT	720
Db	611	TTCTTAATTAATTAATTAATTAATTAATTAATTAATTAATTAATTAATTAAT	670
Qy	721	AACAGAGATGCAATGCTGCTGCTGCTGCTGCTGCTGCTGCTGCTGCTGCTG	780
Db	671	AACAGAGATGCAATGCTGCTGCTGCTGCTGCTGCTGCTGCTGCTGCTGCTG	730
Qy	781	AGGCTAGCTGCTGCTGCTGCTGCTGCTGCTGCTGCTGCTGCTGCTGCTGCTG	840
Db	731	AGGCTAGCTGCTGCTGCTGCTGCTGCTGCTGCTGCTGCTGCTGCTGCTGCTG	790
Qy	841	CGAGCAAGGTCGAGATCAATGCTGCTGCTGCTGCTGCTGCTGCTGCTGCTG	900
Db	791	CGAGCAAGGTCGAGATCAATGCTGCTGCTGCTGCTGCTGCTGCTGCTGCTG	850
Qy	901	ATTGATTTGACCTTAAGATGAGATGCTGCTGCTGCTGCTGCTGCTGCTGCTG	960
Db	851	ATTGATTTGACCTTAAGATGAGATGCTGCTGCTGCTGCTGCTGCTGCTGCTG	910
Qy	961	TGGCAAAAGAGGCTATATTTACTTGTGATGTCAGAGATATATATATATATAT	1020
Db	911	TGGCAAAAGAGGCTATATTTACTTGTGATGTCAGAGATATATATATATATAT	970
Qy	1021	AACAGATGAGTCAATGATATTTCTATGAAAGAAAGCAATCTCTCTGCTG	1080

Db	971	AACAGATGGAATCATGACATATATTTCTAGTAAAGAAACCAATCTCATTTCTCTGCACT	1030
Qy	1081	CTGTGAAGAGCATCAAGTCAGACTTCATTTGACAAGGCTGAGGAATCCACCAATCTAAAG	1140
Db	1031	CTGTGAAGAGCATCAAGTCAGACTTCATTTGACAAGGCTGAGGAATCCACCAATCTAAAG	1090
Qy	1141	AGATPAAGCTTCCTGAAAGCTCTCTCATTTAAATTTTAAAGTTAAACAAGCTGAATGCG	1200
Db	1091	AGATPAAGCTTCCTGAAAGCTCTCTCATTTAAATTTTAAAGTTAAACAAGCTGAATGCG	1150
Qy	1201	CTTTTGTGAGTCTGAGGAGCATTTGGCTTCGTCTTAAATGAAACGTTTCATCTCAGATATTTT	1260
Db	1151	CTTTTGTGAGTCTGAGGAGCATTTGGCTTCGTCTTAAATGAAACGTTTCATCTCAGATATTTT	1210
Qy	1261	CCATCATCTTTGCAAAAATTAATTAACATGTTTGGAAATATGATTAATAACAATTAAGC	1320
Db	1211	CCATCATCTTTGCAAAAATTAATTAACATGTTTGGAAATATGATTAATAACAATTAAGC	1270
Qy	1321	ATGATGCAAGAAATTTATTTCCATGATATTCGTCATTTTGGGTTGTTATTTGCTTTGTCACTT	1380
Db	1271	ATGATGCAAGAAATTTATTTCCATGATATTCGTCATTTTGGGTTGTTATTTGCTTTGTCACTT	1330
Qy	1381	ATTTTCATGACAGGATTTATTTTAAACGACAGAGGGGAAATTTTAAACATGAGATTTAAAGAC	1440
Db	1331	ATTTTCATGACAGGATTTATTTTAAACGACAGAGGGGAAATTTTAAACATGAGATTTAAAGAC	1390
Qy	1441	ACTTGGCTCTCAAAAGCCATGTTATATCCAGATATTTGCTGGTTGATGAAAAAGAAAAACA	1500
Db	1391	ACTTGGCTCTCAAAAGCCATGTTATATCCAGATATTTGCTGGTTGATGAAAAAGAAAAACA	1450
Qy	1501	GCACAGAGAGGCTTACACCAATTTATAGCATAGATATATGCAACAATTCMAAGACCAACAG	1560
Db	1451	GCACAGAGAGGCTTACACCAATTTATAGCATAGATATATGCAACAATTCMAAGACCAACAG	1510
Qy	1561	GTTCCAGGATTTGGCGCTCTTAAACACAAAATGCAACTAATCATGAGGACTTCAGTTATTCATTT	1620
Db	1511	GTTCCAGGATTTGGCGCTCTTAAACACAAAATGCAACTAATCATGAGGACTTCAGTTATTCATTT	1570
Qy	1621	CCTTTATATATGATGAGGAGATGACATTTCTGATTTCTGAGTATTTGCTCCAGTACTTGGCG	1680
Db	1571	CCTTTATATATGATGAGGAGATGACATTTCTGATTTCTGAGTATTTGCTCCAGTACTTGGCG	1630
Qy	1681	TGACAGGAATGATTTGAAAACCGCAGCATGATCTGGATTTGCCACAAGAATATGACAAAGAC	1740
Db	1631	TGACAGGAATGATTTGAAAACCGCAGCATGATCTGGATTTGCCACAAGAATATGACAAAGAC	1690
Qy	1741	TTAAGCATTCGCTGAAAAGATAGCAACTGAAGCTTTGGAGAAATATACGTATCTATAGTGCAT	1800
Db	1691	TTAAGCATTCGCTGAAAAGATAGCAACTGAAGCTTTGGAGAAATATACGTATCTATAGTGCAT	1750
Qy	1801	TAAACAAGGAAAAAGCCTTCGAGCAAAATGTAATGAAGAAGTCCTTCAGACTCMAACAGAA	1860
Db	1751	TAAACAAGGAAAAAGCCTTCGAGCAAAATGTAATGAAGAAGTCCTTCAGACTCMAACAGAA	1810
Qy	1861	ATTAAGCTGGAAGAAAGCAGACATTAATGGAAGCTGTATGCAATTAAGCATGCTTTATAT	1920
Db	1811	ATTAAGCTGGAAGAAAGCAGACATTAATGGAAGCTGTATGCAATTAAGCATGCTTTATAT	1870
Qy	1921	ATTTTGGCTATGACAGAGGTTTGGATTTGGAGCCATTTAAATCAAGCTGGAAGAAATGA	1980
Db	1871	ATTTTGGCTATGACAGAGGTTTGGATTTGGAGCCATTTAAATCAAGCTGGAAGAAATGA	1930
Qy	1981	CCCCAGAGAGGAGTTCATAGTTTATTTTACTGCAATTTGCATATGAGACTATGCGCATCGGAA	2040
Db	1931	CCCCAGAGAGGAGTTCATAGTTTATTTTACTGCAATTTGCATATGAGACTATGCGCATCGGAA	1990
Qy	2041	AAAAGGCTGTTTGGCTCTCTGAATATTTCAAAAGCCAAATCGGGGGCTGCGCATCTGTTTG	2100
Db	1991	AAAAGGCTGTTTGGCTCTCTGAATATTTCAAAAGCCAAATCGGGGGCTGCGCATCTGTTTG	2050
Qy	2101	CCTTGTTGGAAAAAAGAAACCAATTTATGACAGCCGCAATGCAAGAGGAAAAAGCAACACA	2160
Db	2051	CCTTGTTGGAAAAAAGAAATATATGACAGCCGCAATGCAAGAGGAAAAAGCAACACA	2110

QY	2161	TATGTGAAGGGAATTTAGAGTTTGAGAAGCTCTTTCTTCTATCCATGTCGCCAGATG	2220
Db	2111	CATGTGAAGGGAATTTAGAGTTTGAGAAGCTCTTTCTTCTATCCATGTCGCCAGATG	2170
QY	2221	TTTTCATCTCTCGTGGCTTATCCCTCAGTATTTGACGAGAAAGACATGATTTGTGG	2280
Db	2171	TTTTTATCTCTCGTGGCTTATCCCTCAGTATTTGACGAGAAAGACATGATTTGTGG	2230
QY	2281	GGAGCAGCGGCTGTGGGAAAAGCACTTCTGTTCACCTTCTGACAGACCTTTATGACCCG	2340
Db	2231	GGAGCAGCGGCTGTGGGAAAAGCACTTCTGTTCACCTTCTGACAGACCTTTATGACCCG	2290
QY	2341	TGCAAGGACAAAGTCTGTTTGAATGCTGTGATGCAAAAGAAATTTGAATGACAGGCTCC	2400
Db	2291	TGCAAGGACAAAGTCTGTTTGAATGCTGTGATGCAAAAGAAATTTGAATGACAGGCTCC	2350
QY	2401	GTTCGCCAAATAGCAATGCTTCTCTCAAGAGCCTGTGCTCTTTCACCTGACAGCATTTGCTGAGA	2460
Db	2351	GTTCGCCAAATAGCAATGCTTCTCTCAAGAGCCTGTGCTCTTTCACCTGACAGCATTTGCTGAGA	2410
QY	2461	ACATTCGCTTATGTGACAAACAGCCGTGTGTGCTATTAGATGAATCAAGAAGCCGCA	2520
Db	2411	ACATTCGCTTATGTGACAAACAGCCGTGTGTGCTATTAGATGAATCAAGAAGCCGCA	2470
QY	2521	ATGCAAGCAATATCATTTCTTTTATTTGAAGTCTCCCTGAGAAATPACACACAGATTTG	2580
Db	2471	ATGCAAGCAATATCATTTCTTTTATTTGAAGTCTCCCTGAGAAATPACACACAGATTTG	2530
QY	2581	GACTGAAAGAGACACAGCTTTCTGGCGGCCGAGAAACAAAGACTAGCTATTGCAAGGCTC	2640
Db	2531	GACTGAAAGAGACACAGCTTTCTGGCGGCCGAGAAACAAAGACTAGCTATTGCAAGGCTC	2590
QY	2641	TTCTCCAAAAAATTTTATTTGTGTGATGTAGGCGCACCTTCAGCCCTGATATATGACA	2700
Db	2591	TTCTCCAAAAAATTTTATTTGTGTGATGTAGGCGCACCTTCAGCCCTGATATATGACA	2650
QY	2701	GTGAGAAAGTGTTCAGCAATGCCCTGTATTAAGCGGACGAGGAGGACATGCTAGTGG	2760
Db	2651	GTGAGAAAGTGTTCAGCAATGCCCTGTATTAAGCGGACGAGGAGGACATGCTAGTGG	2710
QY	2761	TCAGTCAACAGGCTCTGTGCATTTGAGAACGACAGATTTGATAGTGTCTGCAACATGGAA	2820
Db	2711	TCAGTCAACAGGCTCTGTGCATTTGAGAACGACAGATTTGATAGTGTCTGCAACATGGAA	2770
QY	2821	AGATTAAGGAACAAAGAACTCTCAATAAGAGCTCTCGAANAATCGAGACATATATTTAGT	2880
Db	2771	AGATTAAGGAACAAAGAACTCTCAATAAGAGCTCTCGAANAATCGAGACATATATTTAGT	2830
QY	2881	TAGTGAATGCACAGTCAAGTCAAGTGA	2906
Db	2831	TAGTGAATGCACAGTCAAGTCAAGTGA	2856
RESULT 2			
US-09-873-409-12			
: Sequence 12, Application US/09873409			
: GENERAL INFORMATION:			
: APPLICANT: Frank, Markus			
: TITLE OF INVENTION: A Gene Encoding a Multidrug Resistance Human P-Glycoprotein			
: FILE REFERENCE: 81994/268611			
: CURRENT APPLICATION NUMBER: US/09/873,409			
: NUMBER OF SEQ ID NOS: 19			
: SOFTWARE: PatentIn version 3.0			
: SEQ ID NO 12			
: LENGTH: 3177			
: TYPE: DNA			
: ORGANISM: Homo sapiens			
: FEATURE:			
: NAME/KEY: Note			

LOCATION: (198)..(198)
; OTHER INFORMATION: n at position 198 represents any nucleotide (A, T, C or G)
US-09-873-409-12

Query Match 96.1%; Score 2793; DB 1; Length 3177;
Best Local Similarity 100.0%; Pred. No. 5.2e-11;
Matches 2793; Conservative 0; Mismatches 0; Indels 0; Gaps 0;

114 GTTTCCTTATGATATCATATGAGAGTATGATGAGAGAGAGTCCCTCACTTTGAA 173
1385 GTTTCCTTATGATATCATATGAGAGTATGATGAGAGAGAGTCCCTCACTTTGAA 444
174 ACCTTCGCAATAGCCCGAGAGAGTCCCTTCAATATTTTCCAGGTTATGATAGAAACC 233
445 ACCTTCGCAATAGCCCGAGAGAGTCCCTTCAATATTTTCCAGGTTATGATAGAAACC 504
234 AGTATAGATATCTTTCCAGAGCTGATATTAACCTGAATCCATAGAAAGAACTGTGAA 293
505 AGTATAGATATCTTTCCAGAGCTGATATTAACCTGAATCCATAGAAAGAACTGTGAA 564
294 TTTAAAAATGTTCTTTCAATATTCATCAAGAACATATCAAGATTCTGAAAGTCTG 353
565 TTTAAAAATGTTCTTTCAATATTCATCAAGAACATATCAAGATTCTGAAAGTCTG 624
354 AATCTCAGAAATTAAGTCTGAGAGAGACAGTCCCTTGTGCTGCTCAATGAGAGTGGAG 413
625 AATCTCAGAAATTAAGTCTGAGAGAGACAGTCCCTTGTGCTGCTCAATGAGAGTGGAG 684
414 AGTACGGTATGCTCAGAGTCTGAGAGGTTATATGATCCGATGATGCTTTATCATGTTG 473
685 AGTACGGTATGCTCAGAGTCTGAGAGGTTATATGATCCGATGATGCTTTATCATGTTG 744
474 GATGAGAAATGATCATGAGAGCTTTTAAATGTCGGGCAATATCGAGACATATGAGTGGT 533
745 GATGAGAAATGATCATGAGAGCTTTTAAATGTCGGGCAATATCGAGACATATGAGTGGT 804
534 AGTCAAGAGCCTGTTTGTTCGGGCAACCATCAGTAAATATCAAGTATGAGAGAT 593
805 AGTCAAGAGCCTGTTTGTTCGGGCAACCATCAGTAAATATCAAGTATGAGAGAT 864
594 GATGAGAAATGATCATGAGAGCTTTTAAATGTCGGGCAATATCGAGACATATGAGTGGT 653
865 GATGAGAAATGATCATGAGAGCTTTTAAATGTCGGGCAATATCGAGACATATGAGTGGT 924
654 ATGAGATTTCTTAATTAATTAATTAATTAATTAATTAATTAATTAATTAATTAATTA 713
925 ATGAGATTTCTTAATTAATTAATTAATTAATTAATTAATTAATTAATTAATTAATTA 984
714 GGGCAGAAACAGAGATGCAATGCTGCTGCTTGAATGCTTGAATGCTTGAATGCTTGA 773
985 GGGCAGAAACAGAGATGCAATGCTGCTGCTTGAATGCTTGAATGCTTGAATGCTTGA 1044
774 TTAAGTAGGCTACGCTGCTGCTGCTGCTGCTGCTGCTGCTGCTGCTGCTGCTGCTG 833
1045 TTAAGTAGGCTACGCTGCTGCTGCTGCTGCTGCTGCTGCTGCTGCTGCTGCTGCTG 1104
834 GAGAAAGGAGCAAGAGTCCGACATCAATCGTGTGAGACACCGACTTTTCAATGTTGA 893
1105 GAGAAAGGAGCAAGAGTCCGACATCAATCGTGTGAGACACCGACTTTTCAATGTTGA 1164
894 AGTGAAGATTTGATGTTGATGCTTGAATGAGATGCTGCGGAGAAAGAGACATGCT 953
1165 AGTGAAGATTTGATGTTGATGCTTGAATGAGATGCTGCGGAGAAAGAGACATGCT 1224
954 GAACTAATGCGCAAAAGAGTCTATATTAATTAATTAATTAATTAATTAATTAATTA 1013
1225 GAACTAATGCGCAAAAGAGTCTATATTAATTAATTAATTAATTAATTAATTAATTA 1284
1014 GCTGATGAACAGATGAGATGACATATTTCTAATGAAAGAAACCAACATCACTTCT 1073
1285 GCTGATGAACAGATGAGATGACATATTTCTAATGAAAGAAACCAACATCACTTCT 1344
1074 CTGCACTCTGTGAAAGAGATCAAGTCAATTCATTTGACAAAGCTGAGAAATCCACC 1133

1345 CTGCACTCTGTGAGAGACATCAAGTCAAGTTCATTAACAAGCTGAGAAATCCACC 1404
1134 TCTAAGAGATTAAGTCTTCCGAGAGTCTCTATTAATAAATTTTAAAGTTAAACAAGCT 1193
1405 TCTAAGAGATTAAGTCTTCCGAGAGTCTCTATTAATAAATTTTAAAGTTAAACAAGCT 1464
1194 GAATGAGCTTTTGTGTTGTCGGGAGATGAGCTTCTGTTCTAAATGGAACGTTCATCA 1253
1465 GAATGAGCTTTTGTGTTGTCGGGAGATGAGCTTCTGTTCTAAATGGAACGTTCATCA 1524
1254 GTATTTTCATCATCTTTGCAAAAATTAATTAATTAATTAATTAATTAATTAATTA 1313
1525 GTATTTTCATCATCTTTGCAAAAATTAATTAATTAATTAATTAATTAATTAATTA 1584
1314 TTAAGGATGATGAGAAATTTATTCATGATATTCGATATTTGGGTTGATTTGCTT 1373
1585 TTAAGGATGATGAGAAATTTATTCATGATATTCGATATTTGGGTTGATTTGCTT 1644
1374 GTCAGTTATTTCAATGAGAGATTAATTTTACGAGAGAGAGGAAATTTTAAACATGAGA 1433
1645 GTCAGTTATTTCAATGAGAGATTAATTTTACGAGAGAGAGGAAATTTTAAACATGAGA 1704
1434 TTAAGCACTTGCTTCAAGCCATGTTATATCAGATATGCTGCTGTTGATGAAAG 1493
1705 TTAAGCACTTGCTTCAAGCCATGTTATATCAGATATGCTGCTGTTGATGAAAG 1764
1494 GAAACAGCAAGAGAGCTTGAACAATTAATTAACCAATGATATTAAGCAAAATTAAGGA 1553
1765 GAAACAGCAAGAGAGCTTGAACAATTAATTAACCAATGATATTAAGCAAAATTAAGGA 1824
1554 GCAACAGGTTTCAGAGATTTGCGCTTAAACAATAATGCAATCAATGAGACTTTCACTT 1613
1825 GCAACAGGTTTCAGAGATTTGCGCTTAAACAATAATGCAATCAATGAGACTTTCACTT 1884
1614 ATCATTTCTTTATATATGATGAGAGATGATGATGATGATGATGATGATGATGATG 1673
1885 ATCATTTCTTTATATATGATGAGAGATGATGATGATGATGATGATGATGATGATG 1944
1674 CTTCGCGGACAGAGATTAATGAAACCGGCAATGATGATGATGATGATGATGATGATG 1733
1945 CTTCGCGGACAGAGATTAATGAAACCGGCAATGATGATGATGATGATGATGATGATG 2004
1734 CAAGAATTAAGCAATGCTGAGAAATGAGCAATGAGCTTTGAGAAATTAAGCAATTA 1793
2005 CAAGAATTAAGCAATGCTGAGAAATGAGCAATGAGCTTTGAGAAATTAAGCAATTA 2064
1794 GTGTCATTTAAACAAGGAAAGAGCTTTCGAGCAATGATGAGAGATGCTTCAAGCTCA 1853
2065 GTGTCATTTAAACAAGGAAAGAGCTTTCGAGCAATGATGAGAGATGCTTCAAGCTCA 2124
1854 CACGAAATTAAGCAATGCTGAGAAATGAGCAATGAGCTTTGAGAAATTAAGCAATTA 1913
2125 CACGAAATTAAGCAATGCTGAGAAATGAGCAATGAGCTTTGAGAAATTAAGCAATTA 2184
1914 TTTATATATTTTGTCTATGAGAGAGGTTGATTTGAGAGCTTTTAAATCAAGCTGGA 1973
2185 TTTATATATTTTGTCTATGAGAGAGGTTGATTTGAGAGCTTTTAAATCAAGCTGGA 2244
1974 CGAATGACCCGAGAGGAGATGTTCAATGTTTAACTGCAATGCAATGAGAGCTATGAGCC 2033
2245 CGAATGACCCGAGAGGAGATGTTCAATGTTTAACTGCAATGCAATGAGAGCTATGAGCC 2304
2034 ATGGAAGAAAGCTGCTGTTTGGCTTCTGAAATTAATTCGAAAGCAAAATGCGGGGCTGCGAT 2093
2305 ATGGAAGAAAGCTGCTGTTTGGCTTCTGAAATTAATTCGAAAGCAAAATGCGGGGCTGCGAT 2364
2094 CTGTTTGTCTTTGAGAAAGAAACCAATTAATTAAGAGCCGATCAAGAGGAGAAAG 2153
2365 CTGTTTGTCTTTGAGAAAGAAACCAATTAATTAAGAGCCGATCAAGAGGAGAAAG 2424
2154 CCAGACATATGAGAGGAAATTAAGAGTTGAGAGTCTCTTTCTATCAATGTCG 2213

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Db      2425 CAGAGACATGTAGAGGAAATTAGATTGAGAACTCTTTCTTCTATCCATGTCGC 2484
Qy      2214 CCAGATGTTTTCATCTCCGTGGCTTATCCCTCAGATATTGAGGAGAAAGACATGACA 2273
Db      2485 CCAGATGTTTTCATCTCCGTGGCTTATCCCTCAGATATTGAGGAGAAAGACATGACA 2544
Qy      2274 TTTGTGGGAGACAGCGGCTGTGGGAAAGACATTCTGTTCACTTCTGCAAGACATTAT 2333
Db      2545 TTTGTGGGAGACAGCGGCTGTGGGAAAGACATTCTGTTCACTTCTGCAAGACATTAT 2604
Qy      2334 GACCCGTCGAGGACAGTGTCTTTGATGCTGTGATGCAAAAGAAATTGAATTGATACAG 2393
Db      2605 GACCCGTCGAGGACAGTGTCTTTGATGCTGTGATGCAAAAGAAATTGAATTGATACAG 2664
Qy      2394 TGCTCCGTTCCCAATAGCAATCGTCTCAAGAGCCTGTGCTTCACTGACGACATT 2453
Db      2665 TGCTCCGTTCCCAATAGCAATCGTCTCAAGAGCCTGTGCTTCACTGACGACATT 2724
Qy      2454 GCTGAGAACATCCGCTATGCTGACACAGCCGTGTGTCATTAGATGATCAAGAA 2513
Db      2725 GCTGAGAACATCCGCTATGCTGACACAGCCGTGTGTCATTAGATGATCAAGAA 2784
Qy      2514 GCGGCAATTCGACAAATATCCATTTCTTTATTGAAAGTCTCCCTGGAATACACACA 2573
Db      2785 GCGGCAATTCGACAAATATCCATTTCTTTATTGAAAGTCTCCCTGGAATACACACA 2844
Qy      2574 CAAGTTGACATGAAAGAGACAGCTTCTGGCGGCGCAGAAACAAAGACTAGCTATTGCA 2633
Db      2845 CAAGTTGACATGAAAGAGACAGCTTCTGGCGGCGCAGAAACAAAGACTAGCTATTGCA 2904
Qy      2634 AGGAGCTCTTCCAAAAACCAAAATTTTATTGTTGATGAGGCACTTCAAGCCCTTGAT 2693
Db      2905 AGGAGCTCTTCCAAAAACCAAAATTTTATTGTTGATGAGGCACTTCAAGCCCTTGAT 2964
Qy      2694 AATGACATGAGAAAGTGTTCAGCATGCCCTTGATTAAGCCAGAGAGGAAAGACATGC 2753
Db      2965 AATGACATGAGAAAGTGTTCAGCATGCCCTTGATTAAGCCAGAGAGGAAAGACATGC 3024
Qy      2754 CTAGTGTCACTACAGAGCTCTCTGCAATTGAGAAAGCAGATTGATGAGTCTTGAC 2813
Db      3025 CTAGTGTCACTACAGAGCTCTCTGCAATTGAGAAAGCAGATTGATGAGTCTTGAC 3084
Qy      2814 AATGAAAGATTAAGAAACAAGAACTCATCAAGAGCTCTTGAGAAATCGACATATAT 2873
Db      3085 AATGAAAGATTAAGAAACAAGAACTCATCAAGAGCTCTTGAGAAATCGACATATAT 3144
Qy      2874 TTTAAGTTAGTAATGACAGTCAAGTCAAGTGA 2906
Db      3145 TTTAAGTTAGTAATGACAGTCAAGTCAAGTGA 3177

RESULT 3
US-09-873-409-14
; Sequence 14, Application US/09873409
; GENERAL INFORMATION:
; APPLICANT: Frank, Markus
; APPLICANT: Savech, Mohamed
; TITLE OF INVENTION: A Gene Encoding a Multidrug Resistance Human P-Glycoprotein
; FILE REFERENCE: 81994/268611
; CURRENT APPLICATION NUMBER: US/09/873,409
; NUMBER OF SEQ ID NOS: 19
; SOFTWARE: PatentIn version 3.0
; SEQ ID NO 14
; LENGTH: 3621
; TYPE: DNA
; ORGANISM: Homo sapiens
US-09-873-409-14

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Query Match      96.1%; Score 2793; DB 1; Length 3621;
Best Local Similarity 100.0%; Pred. No. 4.6e-11;
Matches 2793; Conservative 0; Mismatches 0; Indels 0; Gaps 0;

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Qy      114 GTTTCTTTAGTGTAAATCCATAGCACTTATTTGATTTGAGACAGCACTCCCTCACTTGA 173
Db      829 GTTTCTTTAGTGTAAATCCATAGCACTTATTTGATTTGAGACAGCACTCCCTCACTTGA 888
Qy      174 ACTTTGCAATAGCCGAGAGAGCTGCTTCAATATTTTCCAGGTTATGATTAAGAAACC 223
Db      889 ACTTTGCAATAGCCGAGAGAGCTGCTTCAATATTTTCCAGGTTATGATTAAGAAACC 948
Qy      234 AGTATGATTAACCTTTCCACAGCTGATTAACCTGAATCCATAGAGAACTGTGAA 293
Db      949 AGTATGATTAACCTTTCCACAGCTGATTAACCTGAATCCATAGAGAACTGTGAA 1008
Qy      294 TTTAAAAATGTTCTTTCAATTAATCCATCAAGACATCTATCAAGATTCTGAAGCTGTG 353
Db      1009 TTTAAAAATGTTCTTTCAATTAATCCATCAAGACATCTATCAAGATTCTGAAGCTGTG 1068
Qy      354 AATCTCAAGATTAACTGTGAGAGACAGTCGCTTGTGTCTCAATGCACTGGGAA 413
Db      1069 AATCTCAAGATTAACTGTGAGAGACAGTCGCTTGTGTCTCAATGCACTGGGAA 1128
Qy      414 AGTACGTTAGTCCAGCTTCTGACAGGTTATATGATCCGGAATGAGCTTTATCATGTG 473
Db      1129 AGTACGTTAGTCCAGCTTCTGACAGGTTATATGATCCGGAATGAGCTTTATCATGTG 1188
Qy      474 GATGAGAAATGACATCAGACCTTTAAATGTGCGCATTAATGACACATATTGGAGTGT 533
Db      1189 GATGAGAAATGACATCAGACCTTTAAATGTGCGCATTAATGACACATATTGGAGTGT 1248
Qy      534 AGTCAAGAGCTGTTTGTGCGGACCAACATCAGTAACATATCAAGTATGAGACAGAT 593
Db      1249 AGTCAAGAGCTGTTTGTGCGGACCAACATCAGTAACATATCAAGTATGAGACAGAT 1308
Qy      594 GATGACATGATGAAGATGAGAGAGAGAGAGAGAGAGAGAGAGAGAGAGAGAGATTTATC 653
Db      1309 GATGACATGATGAAGATGAGAGAGAGAGAGAGAGAGAGAGAGAGAGAGAGAGATTTATC 1368
Qy      654 ATGAGCTTCTTAATTAATTAATTAATTAATTAATTAATTAATTAATTAATTAATTAAT 713
Db      1369 ATGAGCTTCTTAATTAATTAATTAATTAATTAATTAATTAATTAATTAATTAATTAAT 1428
Qy      714 GGGCAGAAACAGAGATCGCAATTCCTCGCTTATGTTGAAACCCCAAGATTCTGAT 773
Db      1429 GGGCAGAAACAGAGATCGCAATTCCTCGCTTATGTTGAAACCCCAAGATTCTGAT 1488
Qy      774 TTATGAGGCTTACGCTGCTGCTGCTGCTGCTGCTGCTGCTGCTGCTGCTGCTGCTGCTG 833
Db      1489 TTATGAGGCTTACGCTGCTGCTGCTGCTGCTGCTGCTGCTGCTGCTGCTGCTGCTGCTG 1548
Qy      834 GAGAGGCGAGCAAGAGTGCAGCTTACAAATCGTGTAGACACACGACCTTTCTACTATTGCA 893
Db      1549 GAGAGGCGAGCAAGAGTGCAGCTTACAAATCGTGTAGACACACGACCTTTCTACTATTGCA 1608
Qy      894 AGTGCAGATTGATTTGTGACCTTAAGAGATGGAATCTGTGCGGAGAAAGAGACATGCT 953
Db      1609 AGTGCAGATTGATTTGTGACCTTAAGAGATGGAATCTGTGCGGAGAAAGAGACATGCT 1668
Qy      954 GAATTAATGCAAAAGAGTCTATATTAATTAATTAATTAATTAATTAATTAATTAATTA 1013
Db      1669 GAATTAATGCAAAAGAGTCTATATTAATTAATTAATTAATTAATTAATTAATTAATTA 1728
Qy      1014 GCTGATGAACAGATGAGTCAATGACATATTTCTACTGAAAGAAAGCAACTCACTTCT 1073
Db      1729 GCTGATGAACAGATGAGTCAATGACATATTTCTACTGAAAGAAAGCAACTCACTTCT 1188
Qy      1074 CTGCACTGTGTGAAGACATCAAGTCACTTATTTGACAGAGCTGAGGAATCCACCAA 1133
Db      1789 CTGCACTGTGTGAAGACATCAAGTCACTTATTTGACAGAGCTGAGGAATCCACCAA 1848
Qy      1134 TCTTAAGATTAAGTCTTCTGAAAGTCTCTATTAATTAATTAATTAATTAATTAATTAAG 1193
Db      1849 TCTTAAGATTAAGTCTTCTGAAAGTCTCTATTAATTAATTAATTAATTAATTAAGTAA 1908

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Db	2389	TTTGTGGGAGACAGCGGCTGTGGAAAAACATTTCTTTCACTTCTGCAGAGCTTTAT	3048
Qy	2334	GACCCCGTGAAGGACAAAGTGTCTTTTGTATGTGTGTGATGCAAAAAGATTGAATGTACAG	2393
Db	3449	GACCCCGTGAAGGACAAAGTGTCTTTTGTATGTGTGTGATGCAAAAAGATTGAATGTACAG	3108
Qy	2394	TGGCTCCGTTCCCAATATGCAATGCTTCTTCAGAGCCTGTGCTCTTCAATCGACGAT	2453
Db	3109	TGGCTCCGTTCCCAATATGCAATGCTTCTTCAGAGCCTGTGCTCTTCAATCGACGAT	3168
Qy	2454	GCTGAGAAACATTCGCTTATGTGACAAAGCGGTGTGTCATTTAGATGATCAAGAA	2513
Db	3169	GCTGAGAAACATTCGCTTATGTGACAAAGCGGTGTGTCATTTAGATGATCAAGAA	3228
Qy	2514	GCCGCAATGCAGCAAAATATCAATTTCTTTATTTGAAGGTCTCCCTGAGAAATACACACA	2573
Db	3229	GCCGCAATGCAGCAAAATATCAATTTCTTTATTTGAAGGTCTCCCTGAGAAATACACACA	3288
Qy	2574	CAAGTTGACATGAAGGACACAGCTTTCTGCGCGGCAGAAACAAAGACTAGCTATTGCA	2633
Db	3289	CAAGTTGACATGAAGGACACAGCTTTCTGCGCGGCAGAAACAAAGACTAGCTATTGCA	3348
Qy	2634	AGGCTCTTCTCCAAAAACCCAAATTTATTTGTGTGATAGGCACTTACGCCCTGAT	2693
Db	3349	AGGCTCTTCTCCAAAAACCCAAATTTATTTGTGTGATAGGCACTTACGCCCTGAT	3408
Qy	2694	AATGACAGTGAAGAGTGTGTTACAGATGCCCTTGATTTAAACCCAGAGCGGAGACATGC	2753
Db	3409	AATGACAGTGAAGAGTGTGTTACAGATGCCCTTGATTTAAACCCAGAGCGGAGACATGC	3468
Qy	2754	CTAGTGTCTCATCAGAGGCTCTCTGCAATTCAGAACCCGCAATTTGATGATGTCTGCAC	2813
Db	3469	CTAGTGTCTCATCAGAGGCTCTCTGCAATTCAGAACCCGCAATTTGATGATGTCTGCAC	3528
Qy	2814	AATGGAAGATTTAAAGGAAACAGAACTTCATCAAGAGCTCTTGAGAAATCGAGATATAT	2873
Db	3529	AATGGAAGATTTAAAGGAAACAGAACTTCATCAAGAGCTCTTGAGAAATCGAGATATAT	3588
Qy	2874	TTTAAGTTAGTGAATGACAGAGTCAAGTCAAGTGA	2906
Db	3589	TTTAAGTTAGTGAATGACAGAGTCAAGTCAAGTGA	3621

RESULT 4
US-09-873-409-13
Sequence 13: Application US/09873409
GENERAL INFORMATION:
APPLICANT: Frank, Markus
TITLE OF INVENTION: A Gene Encoding a Multidrug Resistance Human P-Glycoprotein
FILE REFERENCE: 81994/268611
CURRENT APPLICATION NUMBER: US/09/873.409
CURRENT FILING DATE: 2001-06-05
NUMBER OF SEQ ID NOS: 19
SOFTWARE: PatentIn version 3.0
SEQ ID NO 13
LENGTH: 3702
TYPE: DNA
ORGANISM: Homo sapiens
FEATURE:
NAME/KEY: Note
LOCATION: (723)..(723)
OTHER INFORMATION: n at position 723 represents any nucleotide (A, T, C or G)
US-09-873-409-13

Query Match 96.1%; Score 2793; DB 1; Length 3702;
Best Local Similarity 100.0%; Pred. No. 4.5e-11;
Matches 2793; Conservative 0; Mismatches 0; Indels 0; Gaps 0;

114 GTTTCTTTAGTGAATCCATGACGATTTGCAATTTGAGACAGCATCCTCACTTTGAA 173

D 910 GTTTCTTAGTGTATCATCAGATTAATGCAATGGAGACAGTCCCTCACTTTGAA 969
Q 174 ACCTCGCAATAGCCCGAGAGAGCTGCTTTCAATATTTCCAGGTATGATAGAAA 233
D 970 ACCCTCCCAATAGCCCGAGAGAGCTGCTTTCAATATTTCCAGGTATGATAGAAA 1029
Q 234 AGTATATATTAATCTTTCCAGAGCTGATTAATACCTGATCCATAGAAAGAACTGTG 293
D 1030 AGTATATATTAATCTTTCCAGAGCTGATTAATACCTGATCCATAGAAAGAACTGTG 1089
Q 294 TTTAAATATGTTCTTTCAATTAATCAATCAAGACATCTATCAAGATTTGAAAGTCTG 353
D 1090 TTTAAATATGTTCTTTCAATTAATCAATCAAGACATCTATCAAGATTTGAAAGTCTG 1149
Q 354 AATCTCAATTAATGCTGAGAGAGAGCTGCTGCTGCTGCTCAATGGCAGTGGAG 413
D 1150 AATCTCAATTAATGCTGAGAGAGAGCTGCTGCTGCTGCTCAATGGCAGTGGAG 1209
Q 414 AGTACGCTAGTCCAGCTTCTGAGAGGTTAATGATCCGATGATGGCTTTATCATGCTG 473
D 1210 AGTACGCTAGTCCAGCTTCTGAGAGGTTAATGATCCGATGATGGCTTTATCATGCTG 1269
Q 474 GATGAGATGACATCAGAGCTTTAAATGTCGAGCTTATGAGACCATATTGGAGTGT 533
D 1270 GATGAGATGACATCAGAGCTTTAAATGTCGAGCTTATGAGACCATATTGGAGTGT 1329
Q 534 AGTCAGAGCTGTTTGTGTCGAGCCACATCAATCAATATCAAGTATGACGAGAT 593
D 1330 AGTCAGAGCTGTTTGTGTCGAGCCACATCAATCAATATCAAGTATGACGAGAT 1389
Q 594 GATGCTGATTAAGATGAGAGAGAGAGAGAGAGAGAGAGAGAGAGAGAGAGAGAG 653
D 1390 GATGCTGATTAAGATGAGAGAGAGAGAGAGAGAGAGAGAGAGAGAGAGAGAGAG 1449
Q 654 ATGAGATTTCTTAATTAATTAATTAATTAATTAATTAATTAATTAATTAATTAAT 713
D 1450 ATGAGATTTCTTAATTAATTAATTAATTAATTAATTAATTAATTAATTAATTAAT 1509
Q 714 GGGCAGAAACAGAGATGCAATGCTGTCGCTTACCTTACCTTACCTTACCTTACCT 773
D 1510 GGGCAGAAACAGAGATGCAATGCTGTCGCTTACCTTACCTTACCTTACCTTACCT 1569
Q 774 TTGATGAGGCTGCTGCTGCTGCTGCTGCTGCTGCTGCTGCTGCTGCTGCTGCTGCT 833
D 1570 TTGATGAGGCTGCTGCTGCTGCTGCTGCTGCTGCTGCTGCTGCTGCTGCTGCTGCT 1629
Q 834 GAGAGGCGAGCAAGAGTCCGACTACATCGTGTAGACACCGACTTTCTACTATTCGA 893
D 1630 GAGAGGCGAGCAAGAGTCCGACTACATCGTGTAGACACCGACTTTCTACTATTCGA 1689
Q 894 AGTGCAGATTTGATTTGACCTTAAGAGATGAAATGCTGGAGAAAGAGACATGCT 953
D 1690 AGTGCAGATTTGATTTGACCTTAAGAGATGAAATGCTGGAGAAAGAGACATGCT 1749
Q 954 GAATCTATGSCAAAGAGGCTATATTAATTAATTAATTAATTAATTAATTAATTAATTA 1013
D 1750 GAATCTATGSCAAAGAGGCTATATTAATTAATTAATTAATTAATTAATTAATTAATTA 1809
Q 1014 GCTGATGAACAGATGAGTCAATGATATTTCTACTGAAAGAAAGCAATCACTTCC 1073
D 1810 GCTGATGAACAGATGAGTCAATGATATTTCTACTGAAAGAAAGCAATCACTTCC 1869
Q 1074 CTGCACTCTGTGAAGAGCATCAAGTCAAGTTCATTAAGCAAGGCTGAGGAACTCA 1133
D 1870 CTGCACTCTGTGAAGAGCATCAAGTTCATTAAGCAAGGCTGAGGAACTCA 11929
Q 1134 TCTAAGAGATTAAGTCTTCTGAAAGTCTCTAATTAATAATTTTAAAGTTAAACAAGCT 1193
D 1930 TCTAAGAGATTAAGTCTTCTGAAAGTCTCTAATTAATAATTTTAAAGTTAAACAAGCT 11989
Q 1194 GAATGACCTTTTGTGCTGAGGAGCATGCTGCTGCTGCTGCTGCTGCTGCTGCTGCT 1253
D 1990 GAATGACCTTTTGTGCTGAGGAGCATGCTGCTGCTGCTGCTGCTGCTGCTGCTGCT 2049

Q 1254 GATATTTCCATCATCTTTGCAAAAAATTAACCATGTTTGAATAATGATTAACACACA 1313
D 2050 GATATTTCCATCATCTTTGCAAAAAATTAACCATGTTTGAATAATGATTAACACACA 2109
Q 1314 TTAAGCATGATGACAGAAATTTATTCATGATATTTGCTATTTGGGTGTTATTTGCTT 1373
D 2110 TTAAGCATGATGACAGAAATTTATTCATGATATTTGCTATTTGGGTGTTATTTGCTT 2169
Q 1374 GTCAGTTATTTCAATGAGGATTAATTTACGAGAGACAGGAGAAATTTTAAAGATGAGA 1433
D 2170 GTCAGTTATTTCAATGAGGATTAATTTACGAGAGACAGGAGAAATTTTAAAGATGAGA 2229
Q 1434 TTAAGCATTTGGCTTTCAAAAGCATGTTATATCAAGATATTTGCTGTTGATGAAAG 1493
D 2230 TTAAGCATTTGGCTTTCAAAAGCATGTTATATCAAGATATTTGCTGTTGATGAAAG 2289
Q 1494 GAAACAGACAGAGAGGCTTGACAAATTAATTAAGCATATATACACAAATTTCAAGGA 1553
D 2290 GAAACAGACAGAGAGGCTTGACAAATTAATTAAGCATATATACACAAATTTCAAGGA 2349
Q 1554 GCAACAGATTTCCAGATGAGGCTTTAATCAAAATATGCAATTAATGAGACTTTCAGTT 1613
D 2350 GCAACAGATTTCCAGATGAGGCTTTAATCAAAATATGCAATTAATGAGACTTTCAGTT 2409
Q 1614 ATCAATTTCTTTATATATGATGAGATGACATTTCTGATTTCTGATATTTGCTCCAGTA 1673
D 2410 ATCAATTTCTTTATATATGATGAGATGACATTTCTGATTTCTGATATTTGCTCCAGTA 2469
Q 1674 CTTCGCTGACAGAGATGATTAATTAATTAATTAATTAATTAATTAATTAATTAATTA 1733
D 2470 CTTCGCTGACAGAGATGATTAATTAATTAATTAATTAATTAATTAATTAATTAATTA 2529
Q 1734 CAAGAATTAAGCATCTGAAAGATAGCACTGAAGCTTTTGGAGATATATGACTATATA 1793
D 2530 CAAGAATTAAGCATCTGAAAGATAGCACTGAAGCTTTTGGAGATATATGACTATATA 2589
Q 1794 GTGCTATTAACAAGGAAAAAGCTTTGAGCAATGATTAAGAGATGCTTCACTCA 1853
D 2590 GTGCTATTAACAAGGAAAAAGCTTTGAGCAATGATTAAGAGATGCTTCACTCA 2649
Q 1854 CACAGAAATACCTCCAGAAAGACAGATTAATTAATTAATTAATTAATTAATTAATTAAT 1913
D 2650 CACAGAAATACCTCCAGAAAGACAGATTAATTAATTAATTAATTAATTAATTAATTAAT 2709
Q 1914 TTTATATATTTTGGCTATGACAGAGGTTTGCATTTGAGAGCTTATTAATTAATTAAT 1973
D 2710 TTTATATATTTTGGCTATGACAGAGGTTTGCATTTGAGAGCTTATTAATTAATTAATTA 2769
Q 1974 CGAATGACCCCAAGAGGATGTTCAATGATTTTACTGCAATGCAATGATGAGCTATGAGCC 2033
D 2770 CGAATGACCCCAAGAGGATGTTCAATGATTTTACTGCAATGCAATGATGAGCTATGAGCC 2829
Q 2034 ATCGAAAAAGCTGCTTTTGGCTCTGTAATTTCCAAAGCCAAATGCGGGGCTGCGCAT 2093
D 2830 ATCGAAAAAGCTGCTTTTGGCTCTGTAATTTCCAAAGCCAAATGCGGGGCTGCGCAT 2889
Q 2094 CTGTTGCTCTGTGAAAGAAACCAATATATAGACGCGGAGTCAAGAGGAAAGAAAG 2153
D 2890 CTGTTGCTCTGTGAAAGAAACCAATATATAGACGCGGAGTCAAGAGGAAAGAAAG 2949
Q 2154 CCAGACACATGTAAGGAATTTAGATTTGAGAGATCTTTTCTTATCATGCTGCGC 2213
D 2950 CCAGACACATGTAAGGAATTTAGATTTGAGAGATCTTTTCTTATCATGCTGCGC 3009
Q 2214 CCAAGATTTTATCTCTCGTGGCTTATTCCTCAATGATGAGCGAGAAAGACAGTACA 2273
D 3010 CCAAGATTTTATCTCTCGTGGCTTATTCCTCAATGATGAGCGAGAAAGACAGTACA 3069
Q 2274 TTTTGGGGAGAGAGGCTGTGGGAAAGCACTTGTGTTCACTTGTGAGAGACTTTAT 2333
D 3070 TTTTGGGGAGAGAGGCTGTGGGAAAGCACTTGTGTTCACTTGTGAGAGACTTTAT 3129


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Qy 2334 GACCCGTCAGAGCAAGTCTGTTGATGATGATGCAAAAAGATTAATGATAG 2393
Db 3130 GACCCGTCAGAGCAAGTCTGTTGATGATGATGCAAAAAGATTAATGATAG 3189
Qy 2394 TGGCTCCGTTCCCAATAGCAATCGTTCTCAAGAGCTGTGCTTCACTGACAT 2453
Db 3190 TGGCTCCGTTCCCAATAGCAATCGTTCTCAAGAGCTGTGCTTCACTGACAT 3249
Qy 2454 GCTGAGAACATCGCTATGATGATGATGATGATGATGATGATGATGATGATG 2513
Db 3250 GCTGAGAACATCGCTATGATGATGATGATGATGATGATGATGATGATGATG 3309
Qy 2514 GCCCGAATGAGCAAAATATCATTTCTTTATTTAGAGCTCTCCCTGAGAAATACACACA 2573
Db 3310 GCCCGAATGAGCAAAATATCATTTCTTTATTTAGAGCTCTCCCTGAGAAATACACACA 3369
Qy 2574 CAAGTTGAGCTGAAAGAGACACAGCTTTCTGCGCGCCAGAAACAAAGACTAGTATGCA 2633
Db 3370 CAAGTTGAGCTGAAAGAGACACAGCTTTCTGCGCGCCAGAAACAAAGACTAGTATGCA 3429
Qy 2634 AGGGCTCTTCCCAAAAACCCAAAATTTTATTTGATGATGATGATGATGATGATGATG 2693
Db 3430 AGGGCTCTTCCCAAAAACCCAAAATTTTATTTGATGATGATGATGATGATGATGATG 3489
Qy 2694 AATGACAGTGAAGAGTGTTCAGCATGCCCTTGATTAAGCCAGGACGGAGAGACATGC 2753
Db 3490 AATGACAGTGAAGAGTGTTCAGCATGCCCTTGATTAAGCCAGGACGGAGAGACATGC 3549
Qy 2754 CTAGTGCTCACTCAAGGCTCTCTGCAATTCAGAACGCAATTTGATGATGATGATGATG 2813
Db 3550 CTAGTGCTCACTCAAGGCTCTCTGCAATTCAGAACGCAATTTGATGATGATGATGATG 3609
Qy 2814 AATGAAAGATTAAGAGAAACAAGAACTCATCAAGAGCTCTGAGAAATGAGACATATAT 2873
Db 3610 AATGAAAGATTAAGAGAAACAAGAACTCATCAAGAGCTCTGAGAAATGAGACATATAT 3669
Qy 2874 TTTAAGTTAGTAATGACAGTCAAGTGCATGTA 2906
Db 3670 TTTAAGTTAGTAATGACAGTCAAGTGCATGTA 3702

RESULT 5
US-09-873-409-9
; Sequence 9 Application US/09873409
; GENERAL INFORMATION:
; APPLICANT: Sayegh, Mohamed
; TITLE OF INVENTION: A Gene Encoding a Multidrug Resistance Human P-Glycoprotein
; FILE REFERENCE: 81994/268611
; CURRENT APPLICATION NUMBER: US/09/873,409
; NUMBER OF SEQ ID NOS: 19
; SOFTWARE: Patent version 3.0
; SEQ ID NO 9
; LENGTH: 2066
; TYPE: DNA
; ORGANISM: Homo sapiens
US-09-873-409-9

Query Match 71.1%; Score 2066; DB 1; Length 2066;
Best Local Similarity 100.0%; Pred. No. 8.66-08;
Matches 2066; Conservative 0; Mismatches 0; Indels 0; Gaps 0;

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Db 121 TGGCAAAACGAGGTCTATATTTATTCATTTGATGATGATGATGATGATGATGATG 180
Qy 1021 AACGATGAGTCAATATATTTCTATCTGAAAGAAAGACCAATCTCTCTGCACT 1080
Db 181 AACGATGAGTCAATATATTTCTATCTGAAAGAAAGACCAATCTCTCTGCACT 240
Qy 1081 CTGTGAAGAGCATCAATGATGATGATGATGATGATGATGATGATGATGATGATG 1140
Db 241 CTGTGAAGAGCATCAATGATGATGATGATGATGATGATGATGATGATGATGATG 300
Qy 1141 AGATTAAGTCTTCTGAAAGTCTCTCTATTAATAATTTTAAAGTTAAACAAGCTGATGAC 1200
Db 301 AGATTAAGTCTTCTGAAAGTCTCTCTATTAATAATTTTAAAGTTAAACAAGCTGATGAC 360
Qy 1201 CTTTGTGCTTCTGAGGACATTTGCTCTGTTCTTAAATGGAACCTGTTCACTATATTTT 1260
Db 361 CTTTGTGCTTCTGAGGACATTTGCTCTGTTCTTAAATGGAACCTGTTCACTATATTTT 420
Qy 1261 CCATCATCTTTGCAAAAATTTATACAGATTTGGAATTAATGATTAACCACTTAAGC 1320
Db 421 CCATCATCTTTGCAAAAATTTATACAGATTTGGAATTAATGATTAACCACTTAAGC 480
Qy 1321 ATGATGAGAAATTTATTCATGATATTCGTCATTTTGGTGTATTTGCTTGTCACT 1380
Db 481 ATGATGAGAAATTTATTCATGATATTCGTCATTTTGGTGTATTTGCTTGTCACT 540
Qy 1381 ATTTGATGAGAGATTTATTTTACGAGAGAGAGGAAATTTTACAGATGATTAAGC 1440
Db 541 ATTTGATGAGAGATTTATTTTACGAGAGAGAGGAAATTTTACAGATGATTAAGC 600
Qy 1441 ACTTGCCCTTCAAGCCATGTTATATGAGATATTTGCTGTTTGAAGAAAGAAACA 1500
Db 601 ACTTGCCCTTCAAGCCATGTTATATGAGATATTTGCTGTTTGAAGAAAGAAACA 660
Qy 1501 GCACAGAGGCTTGACAAACAATATTAAGCATATGATATGACAAATCAAGAGCAACAG 1560
Db 661 GCACAGAGGCTTGACAAACAATATTAAGCATATGATATGACAAATCAAGAGCAACAG 720
Qy 1561 GTTCCAGAGATTTGGCTTTTAAACAAATGCACTAAATGAGACCTTCACTATCAATTT 1620
Db 721 GTTCCAGAGATTTGGCTTTTAAACAAATGCACTAAATGAGACCTTCACTATCAATTT 780
Qy 1621 CCTTATATATGATGAGATGATGATGATGATGATGATGATGATGATGATGATGATG 1680
Db 781 CCTTATATATGATGAGATGATGATGATGATGATGATGATGATGATGATGATGATG 840
Qy 1681 TGACAGAAATGATGAACCGCAGCAATGATGATGATGATGATGATGATGATGATGATG 1740
Db 841 TGACAGAAATGATGAACCGCAGCAATGATGATGATGATGATGATGATGATGATGATG 900
Qy 1741 TTAAGATGCTGAGAAAGATGCAATGAGACTTTGGAATATATGATATGATGATGAT 1800
Db 901 TTAAGATGCTGAGAAAGATGCAATGAGACTTTGGAATATATGATATGATGATGATGAT 960
Qy 1801 TTAACAAGGAAAAAGCCCTTGAGCAATGATGATGATGATGATGATGATGATGATGATG 1860
Db 961 TTAACAAGGAAAAAGCCCTTGAGCAATGATGATGATGATGATGATGATGATGATGATG 1020
Qy 1861 ATACCTGAGAGAAAGCAGATTTTGAAGCTGTGATGATGATGATGATGATGATGATGATG 1920
Db 1021 ATACCTGAGAGAAAGCAGATTTTGAAGCTGTGATGATGATGATGATGATGATGATGATG 1080
Qy 1921 ATTTTGCCTATGAGAGAGGTTTGAATTTGAGAGCTTATTAATTTCAAGCTGAGAGATG 1980
Db 1081 ATTTTGCCTATGAGAGAGGTTTGAATTTGAGAGCTTATTAATTTCAAGCTGAGAGATG 1140
Qy 1981 CCCGAGAGGAGATTTATATGATTTTATCTGCAATTTGATGATGATGATGATGATGATG 2040
Db 1141 CCCGAGAGGAGATTTATATGATTTTATCTGCAATTTGATGATGATGATGATGATGATG 1200
Qy 2041 AAAAGCTGCTTTGGCTCTGGAATATTCAAAAGCAATCGAGGAGCTGCGCATGTTTGG 2100

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Db      1201 AAACGCTGTTTGGCTCTGGAATATTCGAAAGCCAAATGGGGGCTCCGCAATCTGTTTG 1260
Qy      2101 CCTTGTGAAAAAGAAACCAATATAGACAGCCGAGTCAAGAGGAAAAAGCCAGACA 2160
Db      1261 CCTTGTGAAAAAGAAACCAATATAGACAGCCGAGTCAAGAGGAAAAAGCCAGACA 1320
Qy      2161 CATGTGAAGGAATTTAGAGTTTGAGAGAGTCTCTTTCTTCTATCCATGTGCCCCAGATG 2220
Db      1321 CATGTGAAGGAATTTAGAGTTTGAGAGAGTCTCTTTCTTCTATCCATGTGCCCCAGATG 1380
Qy      2221 TTTTCACTCCCGGGCTTATCCCTCAGTATGAGCGAGAAAGACAGTATGATTTGTG 2280
Db      1381 TTTTCACTCCCGGGCTTATCCCTCAGTATGAGCGAGAAAGACAGTATGATTTGTG 1440
Qy      2281 GAGACAGCGGCTGTGGAAAAAGCACTTCTGTTCACCTTGTGAGAGACTTATATGACCCG 2340
Db      1441 GAGACAGCGGCTGTGGAAAAAGCACTTCTGTTCACCTTGTGAGAGACTTATATGACCCG 1500
Qy      2341 TGCAGAGCAAGTCTGTTGATGTGTGATGCAAAAGATGATGATGATGATGATGATGATG 2400
Db      1501 TGCAGAGCAAGTCTGTTGATGTGTGATGCAAAAGATGATGATGATGATGATGATGATG 1560
Qy      2401 GTTCCCAATATAGCAATGATGCTCTCAAGAGCGTGTCTTCACTGAGAGATTTGCTAGA 2460
Db      1561 GTTCCCAATATAGCAATGATGCTCTCAAGAGCGTGTCTTCACTGAGAGATTTGCTAGA 1620
Qy      2461 ACATGCGCTATGTGACAAAGCCGCTGTGTGCTCATTAGATGATGATGATGATGATGATG 2520
Db      1621 ACATGCGCTATGTGACAAAGCCGCTGTGTGCTCATTAGATGATGATGATGATGATGATG 1680
Qy      2521 ATGAGCAAAATATCTATTTCTTTATTTGAAGTCTCTCTGAGAAATCAACACACAGTTG 2580
Db      1681 ATGAGCAAAATATCTATTTCTTTATTTGAAGTCTCTCTGAGAAATCAACACACAGTTG 1740
Qy      2581 GACTGAAGAGGACACAGCTTCTGCGGCGCAGAAACAAAGACTATGCAAGGGCTC 2640
Db      1741 GACTGAAGAGGACACAGCTTCTGCGGCGCAGAAACAAAGACTATGCAAGGGCTC 1800
Qy      2641 TTCTCCAAAAACCCAAATTTTATTTGATGATGAGGACCACTTCAAGCCCTGATATGACA 2700
Db      1801 TTCTCCAAAAACCCAAATTTTATTTGATGATGAGGACCACTTCAAGCCCTGATATGACA 1860
Qy      2701 GTGAGAGGTGTGTTCAAGATGCCCTTATTAAGCCAGAGCGGAGAGACATGCTAGTGG 2760
Db      1861 GTGAGAGGTGTGTTCAAGATGCCCTTATTAAGCCAGAGCGGAGAGACATGCTAGTGG 1920
Qy      2761 TCACTCAGAGGCTCTGCAATTCAGAACGAGATTGATAGTGTCTCTGCACAATGGA 2820
Db      1921 TCACTCAGAGGCTCTCTGCAATTCAGAACGAGATTGATAGTGTCTCTGCACAATGGA 1980
Qy      2821 AGATTAAGGAACAAGAACTCATCAAGAGCTCTGAGAAATCGAGACATATATTTAAGT 2880
Db      1981 AGATTAAGGAACAAGAACTCATCAAGAGCTCTGAGAAATCGAGACATATATTTAAGT 2940
Qy      2881 TAGTGAATGCAACGCTCAGTGAATGCA 2906
Db      2041 TAGTGAATGCAACGCTCAGTGAATGCA 2066

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RESULT 6
US-09-873-409-11

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; Sequence 11, Application US/09873409
; GENERAL INFORMATION:
; APPLICANT: Frank, Markus
; APPLICANT: Sayeh, Mohamed
; TITLE OF INVENTION: A Gene Encoding a Multidrug Resistance Human P-Glycoprotein
; FILE REFERENCE: 81994/268611
; CURRENT APPLICATION NUMBER: US/09/873,409
; CURRENT FILING DATE: 2001-06-05
; NUMBER OF SEQ ID NOS: 19
; SOFTWARE: PatentIn version 3.0
; SEQ ID NO 11

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; LENGTH: 1175
; TYPE: DNA
; ORGANISM: Homo sapiens
US-09-873-409-11

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Query Match      26.0%; Score 755.2; DB 1; Length 1175;
Best Local Similarity 93.7%; Pred. No. 0.043;
Matches 792; Conservative 0; Mismatches 3; Indels 50; Gaps 1;

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Qy      1 CCTAATTCCTTAATATCTCTCTGTGAGCTTAACCAATATATATATATATATATATAT 60
Db      1 CCTAATTCCTTAATATCTCTCTGTGAGCTTAACCAATATATATATATATATATATAT 60
Qy      61 GTCTTTCTTAATATATATATATATATATATATATATATATATATATATATATATATAT 120
Db      61 GTCTTTCTTAATATATATATATATATATATATATATATATATATATATATATATATAT 120
Qy      121 TTAGGTATATATATATATATATATATATATATATATATATATATATATATATATAT 180
Db      121 TTAGGTATATATATATATATATATATATATATATATATATATATATATATATATAT 180
Qy      181 CAATAGCCGAGAGGCTGCTTCAATATTTTCCAGGTTATGATTAAGAAACCAAGATATAG 240
Db      167 -----TTATGATTAAGAAACCAAGATATAG 190
Qy      241 ATAACTTTTCCAGCTGATATATAACTGAATCCATAGAGGAACTGTGAAATTTTAAA 300
Db      191 ATAACTTTTCCAGCTGATATATAACTGAATCCATAGAGGAACTGTGAAATTTTAAA 250
Qy      301 ATGTTCTTTCAATATATATATATATATATATATATATATATATATATATATATATAT 360
Db      251 ATGTTCTTTCAATATATATATATATATATATATATATATATATATATATATATATAT 310
Qy      361 GAATTAAGTCTGAGAGACAGTCCCTGTGCGGTCTCATGAGCAGTGGAGAAAGATACG 420
Db      311 GAATTAAGTCTGAGAGACAGTCCCTGTGCGGTCTCATGAGCAGTGGAGAAAGATACG 370
Qy      421 TAGTCCAGCTTCTGAGAGGTTATATATATATATATATATATATATATATATATATATAT 480
Db      371 TAGTCCAGCTTCTGAGAGGTTATATATATATATATATATATATATATATATATATATAT 430
Qy      481 ATGACATCAAGCTTTTAAATATGCGGCAATTTATGAGAACATATATGAGAGTGTATG 540
Db      431 ATGACATCAAGCTTTTAAATATGCGGCAATTTATGAGAACATATATGAGAGTGTATG 490
Qy      541 AGCCTGTTTGTGCGGAGCAACCATCATGATATATATATATATATATATATATATATAT 600
Db      491 AGCCTGTTTGTGCGGAGCAACCATCATGATATATATATATATATATATATATATATAT 550
Qy      601 CTGATGAAGATGAGAGAGAGAGAGAGAGAGAGAGAGAGAGAGAGAGAGAGAGAGAGAG 660
Db      551 CTGATGAAGATGAGAGAGAGAGAGAGAGAGAGAGAGAGAGAGAGAGAGAGAGAGAGAG 610
Qy      661 TTCTTAATTAATTAATTAATTAATTAATTAATTAATTAATTAATTAATTAATTAATTA 720
Db      611 TTCTTAATTAATTAATTAATTAATTAATTAATTAATTAATTAATTAATTAATTAATTA 670
Qy      721 AACAGAGATGCGCAATGCTGCTGCTTATGATTAAGAAACCAAGATTTGATTTAGATG 780
Db      671 AACAGAGATGCGCAATGCTGCTGCTTATGATTAAGAAACCAAGATTTGATTTAGATG 730
Qy      781 AGGCTACGCTGCGCTGATATTCAGAAAGCAAGTCAAGTCTTCAAGTGCAGTGAAGAG 840
Db      731 AGGCTACGCTGCGCTGATATTCAGAAAGCAAGTCAAGTCTTCAAGTGCAGTGAAGAG 790
Qy      841 CCAGC 845
Db      791 ATAC 795

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RESULT 7
US-09-873-409-16
; Sequence 16, Application US/09873409

GENERAL INFORMATION:
APPLICANT: Frank, Markus
APPLICANT: Sayegh, Mohamed
TITLE OF INVENTION: A Gene Encoding a Multidrug Resistance Human P-Glycoprotein
TITLE OF INVENTION: Homologue on Chromosome 7p15-21 and Uses Thereof
FILE REFERENCE: 81994/268611
CURRENT APPLICATION NUMBER: US/09/873.409
CURRENT FILING DATE: 2001-06-05
NUMBER OF SEQ ID NOS: 19
SOFTWARE: PatentIn version 3.0
SEQ ID NO 16
LENGTH: 1940
TYPE: DNA
ORGANISM: Homo sapiens
US-09-873-409-16

Query Match 25.0%; Score 727.2; DB 1; Length 1940;
Best Local Similarity 99.6%; Pred. No. 0.034;
Matches 729; Conservative 0; Mismatches 3; Indels 0; Gaps 0;

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Qy 114 GTTTCCTTAGTGAATCCATAGCAGTATGACATGGAGAGAGCTCCCTCACTTTGAA 173
Db 829 GTTTCCTTAGTGAATCCATAGCAGTATGACATGGAGAGAGCTCCCTCACTTTGAA 888
Qy 174 ACCTTCGCAATAGCCCGAGAGAGCTGCTTCATATTTTCCAGTTATTGATAGAAACC 233
Db 889 ACCTTCGCAATAGCCCGAGAGAGCTGCTTCATATTTTCCAGTTATTGATAGAAACC 948
Qy 234 AGTATAGATACTTTTCCAGAGCTGATATAAACCCTGAATCCATGANGAACTGTGAA 293
Db 949 AGTATAGATACTTTTCCAGAGCTGATATAAACCCTGAATCCATGANGAACTGTGAA 1008
Qy 294 TTTTAAATGTTTCTTCAATTAATCCATAGACCATATATCAAGATTCGAAAGCTGTG 353
Db 1009 TTTTAAATGTTTCTTCAATTAATCCATAGACCATATATCAAGATTCGAAAGCTGTG 1068
Qy 354 AATCTCAGAAATTAAGTCTGAGAGAGACAGTCCGCTTGTCGCTCAATGAGAGTGGAG 413
Db 1069 AATCTCAGAAATTAAGTCTGAGAGAGACAGTCCGCTTGTCGCTCAATGAGAGTGGAG 1128
Qy 414 AGTACGGTAGTCCAGCTTCTGAGAGAGTTATATGATCCGATGATGCTTTATCATGTG 473
Db 1129 AGTACGGTAGTCCAGCTTCTGAGAGAGTTATATGATCCGATGATGCTTTATCATGTG 1188
Qy 474 GATGAGATGACATGAGAGCTTTAAATGTCGGGCAATTAACAGACATATGAGATGTT 533
Db 1189 GATGAGATGACATGAGAGCTTTAAATGTCGGGCAATTAACAGACATATGAGATGTT 1248
Qy 534 AGTCAAGAGCTGTTTGTTCGGGACCAATCAGTAACAATATCAAGTATGAGAGAT 593
Db 1249 AGTCAAGAGCTGTTTGTTCGGGACCAATCAGTAACAATATCAAGTATGAGAGAT 1308
Qy 594 GATGACTGATGAGAGATGAGAGAGAGAGAGAGAGAGAGAGAGAGAGAGAGAGAT 653
Db 1309 GATGACTGATGAGAGATGAGAGAGAGAGAGAGAGAGAGAGAGAGAGAGAGAGAT 1368
Qy 654 ATGAGATTCTTAATTAATTAATTAATTAATTAATTAATTAATTAATTAATTAATTA 713
Db 1369 ATGAGATTCTTAATTAATTAATTAATTAATTAATTAATTAATTAATTAATTAATTA 1428
Qy 714 GGGGAGAAACAGAGATGCAATTTGCTGCTGCTTATGTAATCCCAAGATTCTGAT 773
Db 1429 GGGGAGAAACAGAGATGCAATTTGCTGCTGCTTATGTAATCCCAAGATTCTGAT 1488
Qy 774 TTAGATGAGGCTACGCTGCTGCTGCTGCTGCTGCTGCTGCTGCTGCTGCTGCTG 833
Db 1489 TTAGATGAGGCTACGCTGCTGCTGCTGCTGCTGCTGCTGCTGCTGCTGCTGCTG 1548
Qy 834 GAGAGAGGAGAG 845
Db 1549 GAGAGAGATACC 1560
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RESULT 8
US-09-873-409-15
Sequence 15, Application US/09873409
GENERAL INFORMATION:
APPLICANT: Frank, Markus
APPLICANT: Sayegh, Mohamed
TITLE OF INVENTION: A Gene Encoding a Multidrug Resistance Human P-Glycoprotein
TITLE OF INVENTION: Homologue on Chromosome 7p15-21 and Uses Thereof
FILE REFERENCE: 81994/268611
CURRENT APPLICATION NUMBER: US/09/873.409
CURRENT FILING DATE: 2001-06-05
NUMBER OF SEQ ID NOS: 19
SOFTWARE: PatentIn version 3.0
SEQ ID NO 15
LENGTH: 2021
TYPE: DNA
ORGANISM: Homo sapiens
FEATURE:
NAME/KEY: Note
LOCATION: (723)..(723)
OTHER INFORMATION: n at position 723 represents any nucleotide (A, T, C or G)
US-09-873-409-15

Query Match 25.0%; Score 727.2; DB 1; Length 2021;
Best Local Similarity 99.6%; Pred. No. 0.033;
Matches 729; Conservative 0; Mismatches 3; Indels 0; Gaps 0;

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Qy 114 GTTTCCTTAGTGAATCCATAGCAGTATGACATGGAGAGAGCTCCCTCACTTTGAA 173
Db 910 GTTTCCTTAGTGAATCCATAGCAGTATGACATGGAGAGAGCTCCCTCACTTTGAA 969
Qy 174 ACCTTCGCAATAGCCCGAGAGAGCTGCTTCATATTTTCCAGTTATTGATAGAAACC 233
Db 970 ACCTTCGCAATAGCCCGAGAGAGCTGCTTCATATTTTCCAGTTATTGATAGAAACC 1029
Qy 234 AGTATAGATACTTTTCCAGAGCTGATATAAACCCTGAATCCATGANGAACTGTGAA 293
Db 1030 AGTATAGATACTTTTCCAGAGCTGATATAAACCCTGAATCCATGANGAACTGTGAA 1089
Qy 294 TTTTAAATGTTTCTTCAATTAATCCATAGACACATATCAAGATTCGAAAGCTGTG 353
Db 1090 TTTTAAATGTTTCTTCAATTAATCCATAGACACATATCAAGATTCGAAAGCTGTG 1149
Qy 354 AATCTCAGAAATTAAGTCTGAGAGAGACAGTCCGCTTGCTCAATGAGAGTGGAG 413
Db 1150 AATCTCAGAAATTAAGTCTGAGAGAGACAGTCCGCTTGCTCAATGAGAGTGGAG 1209
Qy 414 AGTACGGTAGTCCAGCTTCTGAGAGAGTTATATGATCCGATGATGCTTTATCATGTG 473
Db 1210 AGTACGGTAGTCCAGCTTCTGAGAGAGTTATATGATCCGATGATGCTTTATCATGTG 1269
Qy 474 GATGAGATGACATGAGAGCTTTAAATGTCGGGCAATTAACAGACATATGAGATGTT 533
Db 1270 GATGAGATGACATGAGAGCTTTAAATGTCGGGCAATTAACAGACATATGAGATGTT 1329
Qy 534 AGTCAAGAGCTGTTTGTTCGGGACCAATCAGTAACAATTAATCAAGTATGAGAGAT 593
Db 1330 AGTCAAGAGCTGTTTGTTCGGGACCAATCAGTAACAATTAATCAAGTATGAGAGAT 1389
Qy 594 GATGACTGATGAGAGATGAGAGAGAGAGAGAGAGAGAGAGAGAGAGAGAGAGAT 653
Db 1390 GATGACTGATGAGAGATGAGAGAGAGAGAGAGAGAGAGAGAGAGAGAGAGAGAT 1449
Qy 654 ATGAGATTCTTAATTAATTAATTAATTAATTAATTAATTAATTAATTAATTAATTA 713
Db 1450 ATGAGATTCTTAATTAATTAATTAATTAATTAATTAATTAATTAATTAATTAATTA 1509
Qy 714 GGGGAGAAACAGAGATGCAATTTGCTGCTGCTTATGTAATCCCAAGATTCTGAT 773
Db 1510 GGGGAGAAACAGAGATGCAATTTGCTGCTGCTTATGTAATCCCAAGATTCTGAT 1569
Qy 774 TTAGATGAGGCTACGCTGCTGCTGCTGCTGCTGCTGCTGCTGCTGCTGCTGCTG 833
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Db	1570	TTAGATGAGGCTACGCTCTGCCCTGGATTCAGAAAGCAAGTCAGCTGTTCAAGCTGCAC	1629
Qy	834	GAGAGGCGAGC	845
Db	1630	GAGAGGATACC	1641

Search completed: December 18, 2003, 13:02:09
Job time : 34 secs

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OM protein - protein search, using sw model

Run on: December 18, 2003, 12:57:21 ; Search time 1 Seconds
(without alignments)
4.979 Million cell updates/sec

Title: AAO73470
Perfect score: 4079
Sequence: 1 mvndndiralnvhrhig.....qellmrndyfklnagvsq 812

Scoring table: BIOSUM62
Gapop 10.0 , Gapext 0.5

Searched: 8 seqs, 6132 residues

Total number of hits satisfying chosen parameters: 8

Minimum DB seq length: 0
Maximum DB seq length: 2000000000

Post-processing: Minimum Match 0%
Maximum Match 100%

Listing first 8 summaries

Database : US09873409.pep.*

Pred. No. is the number of results predicted by chance to have a score greater than or equal to the score of the result being printed, and is derived by analysis of the total score distribution.

SUMMARIES

Result No.	Score	Query Match	Length	ID	Description
1	4079	100.0	812	1 US-09-873-409-2	Sequence 2, Appli
2	4079	100.0	1058	1 US-09-873-409-4	Sequence 4, Appli
3	4079	100.0	1195	1 US-09-873-409-6	Sequence 6, Appli
4	4079	100.0	1222	1 US-09-873-409-5	Sequence 5, Appli
5	3323	81.5	659	1 US-09-873-409-1	Sequence 1, Appli
6	828	20.3	514	1 US-09-873-409-8	Sequence 8, Appli
7	812.5	19.9	541	1 US-09-873-409-7	Sequence 7, Appli
8	619	15.2	131	1 US-09-873-409-3	Sequence 3, Appli

ALIGNMENTS

RESULT 1
US-09-873-409-2
Sequence 2, Application US/09873409

GENERAL INFORMATION:

APPLICANT: Frank, Markus

APPLICANT: Sayegh, Mohamed

TITLE OF INVENTION: A Gene Encoding a Multidrug Resistance Human P-Glycoprotein

FILE REFERENCE: 81994/268611

CURRENT APPLICATION NUMBER: US/09/873,409

CURRENT FILING DATE: 2001-06-05

NUMBER OF SEQ ID NOS: 19

SOFTWARE: PatentIn version 3.0

SEQ ID NO 2

LENGTH: 812

TYPE: PRT

ORGANISM: Homo sapiens

US-09-873-409-2

Query Match 100.0%; Score 4079; DB 1; Length 812;

Best Local Similarity 100.0%; Pred. No. 0;
Matches 812; Conservative 0; Mismatches 0; Indels 0; Gaps 0;

Qy	1		1		60
Db	1		1		60
Qy	61		61		120
Db	61		61		120
Qy	121		121		180
Db	121		121		180
Qy	181		181		240
Db	181		181		240
Qy	241		241		300
Db	241		241		300
Qy	301		301		360
Db	301		301		360
Qy	361		361		420
Db	361		361		420
Qy	421		421		480
Db	421		421		480
Qy	481		481		540
Db	481		481		540
Qy	541		541		600
Db	541		541		600
Qy	601		601		660
Db	601		601		660
Qy	661		661		720
Db	661		661		720
Qy	721		721		780
Db	721		721		780
Qy	781		781		812
Db	781		781		812

RESULT 2
US-09-873-409-4
Sequence 4, Application US/09873409

GENERAL INFORMATION:

APPLICANT: Frank, Markus

APPLICANT: Sayegh, Mohamed

TITLE OF INVENTION: A Gene Encoding a Multidrug Resistance Human P-Glycoprotein

FILE REFERENCE: 81994/268611

CURRENT APPLICATION NUMBER: US/09/873,409

CURRENT FILING DATE: 2001-06-05

NUMBER OF SEQ ID NOS: 19

SOFTWARE: PatentIn version 3.0

```

; SEQ ID NO 4
; LENGTH: 1058
; TYPE: PRT
; ORGANISM: Homo sapiens
; FEATURE:
; NAME/KEY: Note
; LOCATION: (66)..(66)
; OTHER INFORMATION: Xaa at position 66 represents any L amino acid
US-09-873-409-4

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```

Query Match      100.0%; Score 4079; DB 1; Length 1058;
Best Local Similarity 100.0%; Pred. No. 0;
Matches 812; Conservative 0; Mismatches 0; Indels 0; Gaps 0;

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QY 1 MVDENDIRALNVHRHVDHIGVSOEVLFGTTISNNIKYGRDVTDEMERAREANAYD 60
DB 247 MVDENDIRALNVHRHVDHIGVSOEVLFGTTISNNIKYGRDVTDEMERAREANAYD 306
QY 61 FIMEFPNKFNTLVGEKAQMSGQKORIAIARALVNPXKLLIDEATSALDSSEKSAVQA 120
DB 307 FIMEFPNKFNTLVGEKAQMSGQKORIAIARALVNPXKLLIDEATSALDSSEKSAVQA 366
QY 121 ALEKASGRTTIIVAHRLSTIRSDLIITLKDGMLAEKGAHAEIMAKRGLYSLVMSODI 180
DB 367 ALEKASGRTTIIVAHRLSTIRSDLIITLKDGMLAEKGAHAEIMAKRGLYSLVMSODI 426
QY 181 KKADEQMESMTYSTERKTNLSPLHSVKSISDPIDKAESSTQSKESLSEPVSLKTLKLN 240
DB 427 KKADEQMESMTYSTERKTNLSPLHSVKSISDPIDKAESSTQSKESLSEPVSLKTLKLN 486
QY 241 KPMPFVVLGTLASVLTNGTVHPVFSIIPAKIITMFGNNDKTTLKDAEISMTFVLIGVI 300
DB 487 KPMPFVVLGTLASVLTNGTVHPVFSIIPAKIITMFGNNDKTTLKDAEISMTFVLIGVI 546
QY 301 CFVSYFMQGLFYGRAGEIILTMRLRLHAFKAMLYODIAMPDEKENSIGGLTTIIAIDIAOI 360
DB 547 CFVSYFMQGLFYGRAGEIILTMRLRLHAFKAMLYODIAMPDEKENSIGGLTTIIAIDIAOI 606
QY 361 OGATGSRIGVLTQNAITMGLSVIISFIYGMEMTFLILSTIAPVLAVTGMITTAAMTGANK 420
DB 607 OGATGSRIGVLTQNAITMGLSVIISFIYGMEMTFLILSTIAPVLAVTGMITTAAMTGANK 666
QY 421 DKQELKHAGKIATEALENIRTIIVSLTREKAFEQMYEEMLOTOHRNTSKAQIIGSCYAFS 480
DB 667 DKQELKHAGKIATEALENIRTIIVSLTREKAFEQMYEEMLOTOHRNTSKAQIIGSCYAFS 726
QY 481 HAFIYFAVAAQFRFGAYLIQAGMTPEGMFIVFTAIAYGAMAIKGTILVLAPEYSKAKSGA 540
DB 727 HAFIYFAVAAQFRFGAYLIQAGMTPEGMFIVFTAIAYGAMAIKGTILVLAPEYSKAKSGA 786
QY 541 AHLFALLEKKPNIDRSOEGKKPDTCEGNEFFREVSFFYPCRPDVFLIRGLSISTERGKT 600
DB 787 AHLFALLEKKPNIDRSOEGKKPDTCEGNEFFREVSFFYPCRPDVFLIRGLSISTERGKT 846
QY 601 VAFVSSGGCKSTSVQLLQRLYDPVOGOVLFDGVDAKEINVOQLRSQIAIVPOEPVLFNC 660
DB 847 VAFVSSGGCKSTSVQLLQRLYDPVOGOVLFDGVDAKEINVOQLRSQIAIVPOEPVLFNC 906
QY 661 SIENIAVGNRSRVPLDEIKEAANAANHSFIEGLPEKNTQVGLKGAQISGGQKORLA 720
DB 907 SIENIAVGNRSRVPLDEIKEAANAANHSFIEGLPEKNTQVGLKGAQISGGQKORLA 966
QY 721 IARALLQKPKILLDEATSALDNDSEKVVQHALDKARTGTCIVVTHRLSAIQNAADLIIV 780
DB 967 IARALLQKPKILLDEATSALDNDSEKVVQHALDKARTGTCIVVTHRLSAIQNAADLIIV 1026
QY 781 LHNGKIQEGTHQELLRNDIYFELVNAQSVQ 812
DB 1027 LHNGKIQEGTHQELLRNDIYFELVNAQSVQ 1058

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RESULT 3
US-09-873-409-6

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; Sequence 6, Application US/09873409
; GENERAL INFORMATION:
; APPLICANT: Frank, Markus
; TITLE OF INVENTION: A gene encoding a multidrug resistance human P-glycoprotein
; FILE REFERENCE: 81994/268611
; CURRENT APPLICATION NUMBER: US/09/873,409
; NUMBER OF SEQ ID NOS: 19
; SOFTWARE: PatentIn version 3.0
; SEQ ID NO 6
; LENGTH: 1195
; TYPE: PRT
; ORGANISM: Homo sapiens
US-09-873-409-6

```

```

Query Match      100.0%; Score 4079; DB 1; Length 1195;
Best Local Similarity 100.0%; Pred. No. 0;
Matches 812; Conservative 0; Mismatches 0; Indels 0; Gaps 0;

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```

QY 1 MVDENDIRALNVHRHVDHIGVSOEVLFGTTISNNIKYGRDVTDEMERAREANAYD 60
DB 384 MVDENDIRALNVHRHVDHIGVSOEVLFGTTISNNIKYGRDVTDEMERAREANAYD 443
QY 61 FIMEFPNKFNTLVGEKAQMSGQKORIAIARALVNPXKLLIDEATSALDSSEKSAVQA 120
DB 444 FIMEFPNKFNTLVGEKAQMSGQKORIAIARALVNPXKLLIDEATSALDSSEKSAVQA 503
QY 121 ALEKASGRTTIIVAHRLSTIRSDLIITLKDGMLAEKGAHAEIMAKRGLYSLVMSODI 180
DB 504 ALEKASGRTTIIVAHRLSTIRSDLIITLKDGMLAEKGAHAEIMAKRGLYSLVMSODI 563
QY 181 KKADEQMESMTYSTERKTNLSPLHSVKSISDPIDKAESSTQSKESLSEPVSLKTLKLN 240
DB 564 KKADEQMESMTYSTERKTNLSPLHSVKSISDPIDKAESSTQSKESLSEPVSLKTLKLN 623
QY 241 KPMPFVVLGTLASVLTNGTVHPVFSIIPAKIITMFGNNDKTTLKDAEISMTFVLIGVI 300
DB 624 KPMPFVVLGTLASVLTNGTVHPVFSIIPAKIITMFGNNDKTTLKDAEISMTFVLIGVI 683
QY 301 CFVSYFMQGLFYGRAGEIILTMRLRLHAFKAMLYODIAMPDEKENSIGGLTTIIAIDIAOI 360
DB 684 CFVSYFMQGLFYGRAGEIILTMRLRLHAFKAMLYODIAMPDEKENSIGGLTTIIAIDIAOI 743
QY 361 OGATGSRIGVLTQNAITMGLSVIISFIYGMEMTFLILSTIAPVLAVTGMITTAAMTGANK 420
DB 744 OGATGSRIGVLTQNAITMGLSVIISFIYGMEMTFLILSTIAPVLAVTGMITTAAMTGANK 803
QY 421 DKQELKHAGKIATEALENIRTIIVSLTREKAFEQMYEEMLOTOHRNTSKAQIIGSCYAFS 480
DB 804 DKQELKHAGKIATEALENIRTIIVSLTREKAFEQMYEEMLOTOHRNTSKAQIIGSCYAFS 863
QY 481 HAFIYFAVAAQFRFGAYLIQAGMTPEGMFIVFTAIAYGAMAIKGTILVLAPEYSKAKSGA 540
DB 864 HAFIYFAVAAQFRFGAYLIQAGMTPEGMFIVFTAIAYGAMAIKGTILVLAPEYSKAKSGA 923
QY 541 AHLFALLEKKPNIDRSOEGKKPDTCEGNEFFREVSFFYPCRPDVFLIRGLSISTERGKT 600
DB 924 AHLFALLEKKPNIDRSOEGKKPDTCEGNEFFREVSFFYPCRPDVFLIRGLSISTERGKT 983
QY 601 VAFVSSGGCKSTSVQLLQRLYDPVOGOVLFDGVDAKEINVOQLRSQIAIVPOEPVLFNC 660
DB 984 VAFVSSGGCKSTSVQLLQRLYDPVOGOVLFDGVDAKEINVOQLRSQIAIVPOEPVLFNC 1043
QY 661 SIENIAVGNRSRVPLDEIKEAANAANHSFIEGLPEKNTQVGLKGAQISGGQKORLA 720
DB 1044 SIENIAVGNRSRVPLDEIKEAANAANHSFIEGLPEKNTQVGLKGAQISGGQKORLA 1103
QY 721 IARALLQKPKILLDEATSALDNDSEKVVQHALDKARTGTCIVVTHRLSAIQNAADLIIV 780
DB 1104 IARALLQKPKILLDEATSALDNDSEKVVQHALDKARTGTCIVVTHRLSAIQNAADLIIV 1163

```

Qy 781 LHNKIKEQGTGTHQLLRNRDIYFKLVNAQSVQ 812
 |||
 Db 1164 LHNKIKEQGTGTHQLLRNRDIYFKLVNAQSVQ 1195

RESULT 4
 ; US-09-873-409-5
 ; Sequence 5, Application US/09873409
 ; GENERAL INFORMATION:
 ; APPLICANT: Frank, Markus
 ; APPLICANT: Sayegh, Mohamed
 ; TITLE OF INVENTION: A Gene Encoding a Multidrug Resistance Human P-Glycoprotein
 ; FILE REFERENCE: 81994/268611
 ; CURRENT APPLICATION NUMBER: US/09/873,409
 ; NUMBER OF SEQ ID NOS: 19
 ; SOFTWARE: PatentIn version 3.0
 ; SEQ ID NO 5
 ; LENGTH: 1222
 ; TYPE: PRT
 ; ORGANISM: Homo sapiens
 ; FEATURE:
 ; NAME/KEY: Note
 ; LOCATION: (230)..(230)
 ; OTHER INFORMATION: Xaa at position 230 represents any L amino acid
 ; US-09-873-409-5

Query Match 100.0%; Score 4079; DB 1; Length 1222;
 Best Local Similarity 100.0%; Pred. No. 0;
 Matches 812; Conservative 0; Mismatches 0; Indels 0; Gaps 0;

Qy 1 MVDENDIRALNVHRHDIHVVSQEPVLFCTTISNNIKYGRDDVTDEMERAAAREANAYD 60
 |||
 Db 411 MVDENDIRALNVHRHDIHVVSQEPVLFCTTISNNIKYGRDDVTDEMERAAAREANAYD 470

Qy 61 FIMEFPNKFTLVGEKGAQMGQKORAIARALVRNPKIILDEATSAIDSEKSAVOA 120
 |||
 Db 471 FIMEFPNKFTLVGEKGAQMGQKORAIARALVRNPKIILDEATSAIDSEKSAVOA 530

Qy 121 ALEKRSKRTTIIVAAHRLSTIRADLIYTLKGMIAERGAHAELMAKRGLYSLVMSQDI 180
 |||
 Db 531 ALEKRSKRTTIIVAAHRLSTIRADLIYTLKGMIAERGAHAELMAKRGLYSLVMSQDI 590

Qy 181 KKAEQMSMTYSTERKTNLSPLHSVKSISKDFIDKAEESTQSKESILPEVSLKILKLN 240
 |||
 Db 591 KKAEQMSMTYSTERKTNLSPLHSVKSISKDFIDKAEESTQSKESILPEVSLKILKLN 650

Qy 241 KPEMPFVLGLTASVLANGTVHPVFSIIPAKIITMFGNNDKTTLKDAEIVSMIFVILGVI 300
 |||
 Db 651 KPEMPFVLGLTASVLANGTVHPVFSIIPAKIITMFGNNDKTTLKDAEIVSMIFVILGVI 710

Qy 301 CFVSYFMQGLFYGRAGEILITMRRLHIAFKAMLYODIAWFDEKENSTGGLTTIILADIAOI 360
 |||
 Db 711 CFVSYFMQGLFYGRAGEILITMRRLHIAFKAMLYODIAWFDEKENSTGGLTTIILADIAOI 770

Qy 361 OGATGSRIGVLTQNAATNGLSVIISFIYGMEMTFLISIAPLVATGMIEIAAMGPAFK 420
 |||
 Db 771 OGATGSRIGVLTQNAATNGLSVIISFIYGMEMTFLISIAPLVATGMIEIAAMGPAFK 830

Qy 421 DKOEKHAQKATLEALENIRITVSLTREKAFQWMEEMLOTOHRTSSKAAQIIGSCYAFS 480
 |||
 Db 831 DKOEKHAQKATLEALENIRITVSLTREKAFQWMEEMLOTOHRTSSKAAQIIGSCYAFS 890

Qy 481 HAFIYFAYAGFRFGAVLIQAGRMTPBGMFIVFTAIAGANAIGKTLVLABEYSKAKGA 540
 |||
 Db 891 HAFIYFAYAGFRFGAVLIQAGRMTPBGMFIVFTAIAGANAIGKTLVLABEYSKAKGA 950

Qy 541 AHLFALLEKRPIDRSQEGKPDTCENLREHREVSFYPGCPDVFIIRGLSLSTERKT 600
 |||
 Db 951 AHLFALLEKRPIDRSQEGKPDTCENLREHREVSFYPGCPDVFIIRGLSLSTERKT 1010

Qy 601 VAFVSSGCGKSTSVQLLQRLYDPVQGVLPDGVDAKELNVQMLRSQIAIVQEBVLNFC 660

Db 1011 VAFVSSGCGKSTSVQLLQRLYDPVQGVLPDGVDAKELNVQMLRSQIAIVQEBVLNFC 1070
 |||
 Qy 661 SIENIAVGNNSRVVPIDEIKEAANAANHSFIEGLEKNTQVGLGAQDSGGQKORLA 720
 |||
 Db 1071 SIENIAVGNNSRVVPIDEIKEAANAANHSFIEGLEKNTQVGLGAQDSGGQKORLA 1130

Qy 721 IARALLQPKILLDEATSAIDNDEKRYOHAADKATGRTCLVTRLSAIONADLIIV 780
 |||
 Db 1131 IARALLQPKILLDEATSAIDNDEKRYOHAADKATGRTCLVTRLSAIONADLIIV 1190

Qy 781 LHNKIKEQGTGTHQLLRNRDIYFKLVNAQSVQ 812
 |||
 Db 1191 LHNKIKEQGTGTHQLLRNRDIYFKLVNAQSVQ 1222

RESULT 5
 ; US-09-873-409-1
 ; Sequence 1, Application US/09873409
 ; GENERAL INFORMATION:
 ; APPLICANT: Frank, Markus
 ; APPLICANT: Sayegh, Mohamed
 ; TITLE OF INVENTION: A Gene Encoding a Multidrug Resistance Human P-Glycoprotein
 ; FILE REFERENCE: 81994/268611
 ; CURRENT APPLICATION NUMBER: US/09/873,409
 ; NUMBER OF SEQ ID NOS: 19
 ; SOFTWARE: PatentIn version 3.0
 ; SEQ ID NO 1
 ; LENGTH: 659
 ; TYPE: PRT
 ; ORGANISM: Homo sapiens
 ; US-09-873-409-1

Query Match 81.5%; Score 3323; DB 1; Length 659;
 Best Local Similarity 100.0%; Pred. No. 0;
 Matches 659; Conservative 0; Mismatches 0; Indels 0; Gaps 0;

Qy 154 MIAKGAHAELMAKRGLYSLVMSQDIKKAEQMSMTYSTERKTNLSPLHSVKSISDF 213
 |||
 Db 1 MIAKGAHAELMAKRGLYSLVMSQDIKKAEQMSMTYSTERKTNLSPLHSVKSISDF 60

Qy 214 IDKAEESTQSKESILPEVSLKILKLNKPEMPFVLGLTASVLANGTVHPVFSIIPAKIIT 273
 |||
 Db 61 IDKAEESTQSKESILPEVSLKILKLNKPEMPFVLGLTASVLANGTVHPVFSIIPAKIIT 120

Qy 274 MFGNNDKTTLKDAEIVSMIFVILGVI CFVSYFMQGLFYGRAGEILITMRRLHIAFKAMLY 333
 |||
 Db 121 MFGNNDKTTLKDAEIVSMIFVILGVI CFVSYFMQGLFYGRAGEILITMRRLHIAFKAMLY 180

Qy 334 ODIAWPEKENSTGGLTTIILADIAOIGATGSRIGVLTQNAATNGLSVIISFIYGMEMT 393
 |||
 Db 181 ODIAWPEKENSTGGLTTIILADIAOIGATGSRIGVLTQNAATNGLSVIISFIYGMEMT 240

Qy 394 FLIISIAVLAVTGMIEIAAMTGFANKOELKHAQKATLEALENIRITVSLTREKAFEQ 453
 |||
 Db 241 FLIISIAVLAVTGMIEIAAMTGFANKOELKHAQKATLEALENIRITVSLTREKAFEQ 300

Qy 454 MYEEMLOTOHRTSSKAAQIIGSCYAFSHAFTYFAYAGFRFGAVLIQAGRMTPBGMFIVF 513
 |||
 Db 301 MYEEMLOTOHRTSSKAAQIIGSCYAFSHAFTYFAYAGFRFGAVLIQAGRMTPBGMFIVF 360

Qy 514 TAIAYGAMAIGKTLVLABEYSKAKGAHAELFALEKRPIDRSQEGKPDTCENLREHRE 573
 |||
 Db 361 TAIAYGAMAIGKTLVLABEYSKAKGAHAELFALEKRPIDRSQEGKPDTCENLREHRE 420

Qy 574 EVSFPYCRPVPVFIIRGLSLSTERKTVAFAVSSGCGKSTSVQLLQRLYDPVQGVLPDGV 633
 |||
 Db 421 EVSFPYCRPVPVFIIRGLSLSTERKTVAFAVSSGCGKSTSVQLLQRLYDPVQGVLPDGV 480

Qy 634 VDAKELNVQMLRSQIAIVQEBVLNFC 693
 |||


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Db      481 VDAKELNVQWLRSGQIAIVPEPVLFNCSIAENIAYGNSRVPLDEIKKANANIHSTI 540
Qy      694 EGPPEKNTVOVGLKGAQSGSGQKORLAIARALLQPKILLDETSALDNDSEKVVQHAL 753
Db      541 EGPPEKNTVOVGLKGAQSGSGQKORLAIARALLQPKILLDETSALDNDSEKVVQHAL 600
Qy      754 DKARTGTCVTVTRLSAIONADLIVLHNGKIKEQSTHQLLRNRDIYFKLVNAGSVQ 812
Db      601 DKARTGTCVTVTRLSAIONADLIVLHNGKIKEQSTHQLLRNRDIYFKLVNAGSVQ 659

RESULT 6
US-09-873-409-8
; Sequence 8, Application US/09873409
; GENERAL INFORMATION:
; APPLICANT: Frank, Markus
; APPLICANT: Sayegh, Mohamed
; TITLE OF INVENTION: A Gene Encoding a Multidrug Resistance Human P-Glycoprotein
; FILE REFERENCE: 81994/268611
; CURRENT APPLICATION NUMBER: US/09/873,409
; CURRENT FILING DATE: 2001-06-05
; NUMBER OF SEQ ID NOS: 19
; SOFTWARE: Patentin version 3.0
; SEQ ID NO 8
; LENGTH: 514
; TYPE: PR1
; ORGANISM: Homo sapiens
; US-09-873-409-8

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Query Match      20.3%; Score 828; DB 1; Length 514;
Best Local Similarity 36.7%; Pred. No. 0;
Matches 191; Conservative 103; Mismatches 202; Indels 24; Gaps 8;

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Qy      247 VVGLTASVLTNGTVHPVPSIIIPAKIITMFGNNDKTLKHADEIYS-----MTFVLGVIC 301
Db      1 MILGILASLVNGACLPMLPLVLGEM-----SDNLISGCLVQNTNTSPFRLLTLVYVGIVAA 56
Qy      302 FVSVMQGLFYGRAGILTLRLHLAFKAMLYODIAMFDEKENSSTGLTTILAIDIAQIQ 361
Db      57 LIGVYQISLMTITTAARQTRIRKQFPHSVLAQDIDMFDSQD--IGELNTRMT-DIDKIS 113
Qy      362 GATGSRIGVLTQNTATNMNGLSVIISFIYGMEMFLISIAVLAVTGMIEPAAWTGPANKD 421
Db      114 DGIGDKIALLFQNMSTFSIGLAVGLVKGMKTLTVLTSTPLIMASAAASRMVYISLTSKE 173
Qy      422 KQELKHAGKIATALENIRITVLSITREKAFEQMTEMLQTOH---RNTSKAQIIGSCY 477
Db      174 LSAVSKAGAAVEVLSSIRTVIAFRAQEKELQRYTONLKADKQFGIRKRTIASKVSLGAVY 233
Qy      478 AFSHAFTYFAAAGFRGAYLIQAGR--MTPEGMFIYFTAIAYGAMAIGKTLVLAPESYK 535
Db      234 FPMNG-----TYGLAFWYGTSLILNGEBCYITIGTLAVFVSHSYCIGAAVHFEETFAI 289
Qy      536 AKSGAHLFALLEKKNIDRSQEGKKPDTCEGNLEFREVSEFYPCRPDVFIIRGLSLSTI 595
Db      290 ARGAFAFIIFQVIDKPSIDNFSTAGYVPEBSIEGTVEFKVNSFVNPSPRSIKILKGLNLR 349
Qy      596 ERKQTVAFVSSGCGKSTVOQLQRLYDPVOGVLFPQVADKELNVQWLRSGQIAIVPEP 655
Db      350 KSGETVALVNLNGSGKSTVOQLQRLYDPDGGFVMDENDIRANVHYVDHIGVVSQEP 409
Qy      656 VLFNCSIAENIAYGNSRVPLDEIKKANANIHSTIEGLPEKYNTQVGLKGAQSGGQ 715
Db      410 VLFQTTISNNIKYGRD--VTDEMERARABANAYDIMEFPKKNLTVGEKAGQSGGQ 467
Qy      716 KQRIAIARALLQPKILLDETSALDNDSEKVVQHALDK 755
Db      468 KQRIAIARALVRNPKIILDEATSAIDSEKSAVQALEK 507

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RESULT 7
US-09-873-409-7

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; Sequence 7, Application US/09873409
; GENERAL INFORMATION:
; APPLICANT: Frank, Markus
; APPLICANT: Sayegh, Mohamed
; TITLE OF INVENTION: A Gene Encoding a Multidrug Resistance Human P-Glycoprotein
; FILE REFERENCE: 81994/268611
; CURRENT APPLICATION NUMBER: US/09/873,409
; CURRENT FILING DATE: 2001-06-05
; NUMBER OF SEQ ID NOS: 19
; SOFTWARE: Patentin version 3.0
; SEQ ID NO 7
; LENGTH: 511
; TYPE: PR1
; ORGANISM: Homo sapiens
; FEATURE:
; NAME/KEY: Note
; LOCATION: (230)..(230)
; OTHER INFORMATION: Xaa at position 230 represents any L amino acid
; US-09-873-409-7

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Query Match      19.9%; Score 812.5; DB 1; Length 511;
Best Local Similarity 35.5%; Pred. No. 0;
Matches 194; Conservative 106; Mismatches 196; Indels 51; Gaps 11;

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Qy      247 VVGLTASVLTNGTVHPVPSIIIPAKIITMFGNNDKTLKHADEIYS-----MTFVLGVIC 301
Db      1 MILGILASLVNGACLPMLPLVLGEM-----SDNLISGCLVQNTNTSPFRLLTLVYVGIVAA 56
Qy      302 FVSVMQGLFYGRAGILTLRLHLAFKAMLYODIAMFDEKENSSTGLTTILAIDIAQIQ 361
Db      57 LIGVYQISLMTITTAARQTRIRKQFPHSVLAQDIDMFDSQD--IGELNTRMT-DIDKIS 113
Qy      362 GATGSRIGVLTQNTATNMNGLSVIISFIYGMEMFLISIAVLAVTGMIEPAAWTGPANKD 421
Db      114 DGIGDKIALLFQNMSTFSIGLAVGLVKGMKTLTVLTSTPLIMASAAASRMVYISLTSKE 173
Qy      422 KQELKHAGKIATALENIRITVLSITREKAFEQMTEMLQTOH---RNTSKAQIIGSCY 477
Db      174 LSAVSKAGAAVEVLSSIRTVIAFRAQEKELQRYTONLKADKQFGIRKRTIASKVSLGAVY 233
Qy      461 -TQNRNTSKAQI-----IGSCYAPSHAFTYFAAAGFRGAYLIQAGR--MTPEGS 508
Db      234 YTONLMDADDFGIRKRTIASKVSLGAVYFFMNG--TYGLAFWYGTSLILNGEBCYITIGT 289
Qy      509 MFIYFTAIAYGAMAIGKTLVLAPESYKAKSGAHLFALLEKKNIDRSQEGKKPDTCEG 568
Db      290 VLAVFPSVHSSYICIGAAVHFEETFAIARGAFAHIQVIDKPSIDNFSTAGYKPSIRS 349
Qy      569 NLEFREVSEFYPCRPDVFIIRGLSLSTIERKQTVAFVSSGCGKSTVOQLQRLYDPVOGQ 628
Db      350 TYEFKNVSNFNPSPRSIKILKGLNLRKISGETVALVGLNGSGKSTVOQLQRLYDPDDG 409
Qy      629 VLFQVDAKELNVQWLRSGQIAIVPEPVLFNCSIAENIAYGNSRVPLDEIKKANAN 688
Db      410 INVDEMDIALNVRHNDIGVVSQEPVLEGTISNNIKYGRD--VTDEMERARABAN 467
Qy      689 IHSFIEGPEKYNTQVGLKGAQSGQKORLAIARALLQPKILLDETSALDNDSEK 748
Db      468 AYDFIMEFPKKNLTVGEKAGQSGQKORLAIARALVRNPKIILDEATSAIDSESKA 527
Qy      749 VQHALDK 755
Db      528 VQAALEK 534

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RESULT 8
US-09-873-409-3
; Sequence 3, Application US/09873409
; GENERAL INFORMATION:
; APPLICANT: Frank, Markus
; APPLICANT: Sayegh, Mohamed
; TITLE OF INVENTION: A Gene Encoding a Multidrug Resistance Human P-Glycoprotein

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; TITLE OF INVENTION: Homologue on Chromosome 7p15-21 and Uses Thereof
 ; FILE REFERENCE: 81994/268611
 ; CURRENT APPLICATION NUMBER: US/09/873,409
 ; CURRENT FILING DATE: 2001-06-05
 ; NUMBER OF SEQ ID NOS: 19
 ; SOFTWARE: PatentIn version 3.0
 ; SEQ ID NO 3
 ; LENGTH: 131
 ; TYPE: PRT
 ; ORGANISM: Homo sapiens
 US-09-873-409-3

Query Match 15.2%; Score 619; DB 1; Length 131;
 Best Local Similarity 100.0%; Pred. No. 0;
 Matches 124; Conservative 0; Mismatches 0; Indels 0; Gaps 0;

Qy	1	MVDNDIRALNVRHRRDHIGVVSQEPVLFGTTSNNIKYGRDDVTDEMERARARANAYD	60
Db	1	MVDNDIRALNVRHRRDHIGVVSQEPVLFGTTSNNIKYGRDDVTDEMERARARANAYD	60
Qy	61	FIMEPPNKFTLVGEGKAQMSGGQKORIAIARALVARNPKIILDEATSAIDSESKSAVQA	120
Db	61	FIMEPPNKFTLVGEGKAQMSGGQKORIAIARALVARNPKIILDEATSAIDSESKSAVQA	120
Qy	121	ALEK 124	
Db	121	ALEK 124	

Search completed: December 18, 2003, 12:57:23
 Job time : 2 secs

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